



The FOUNTAIN OF YOUTH



GRACE · PECKHAM · MURRAY · MD

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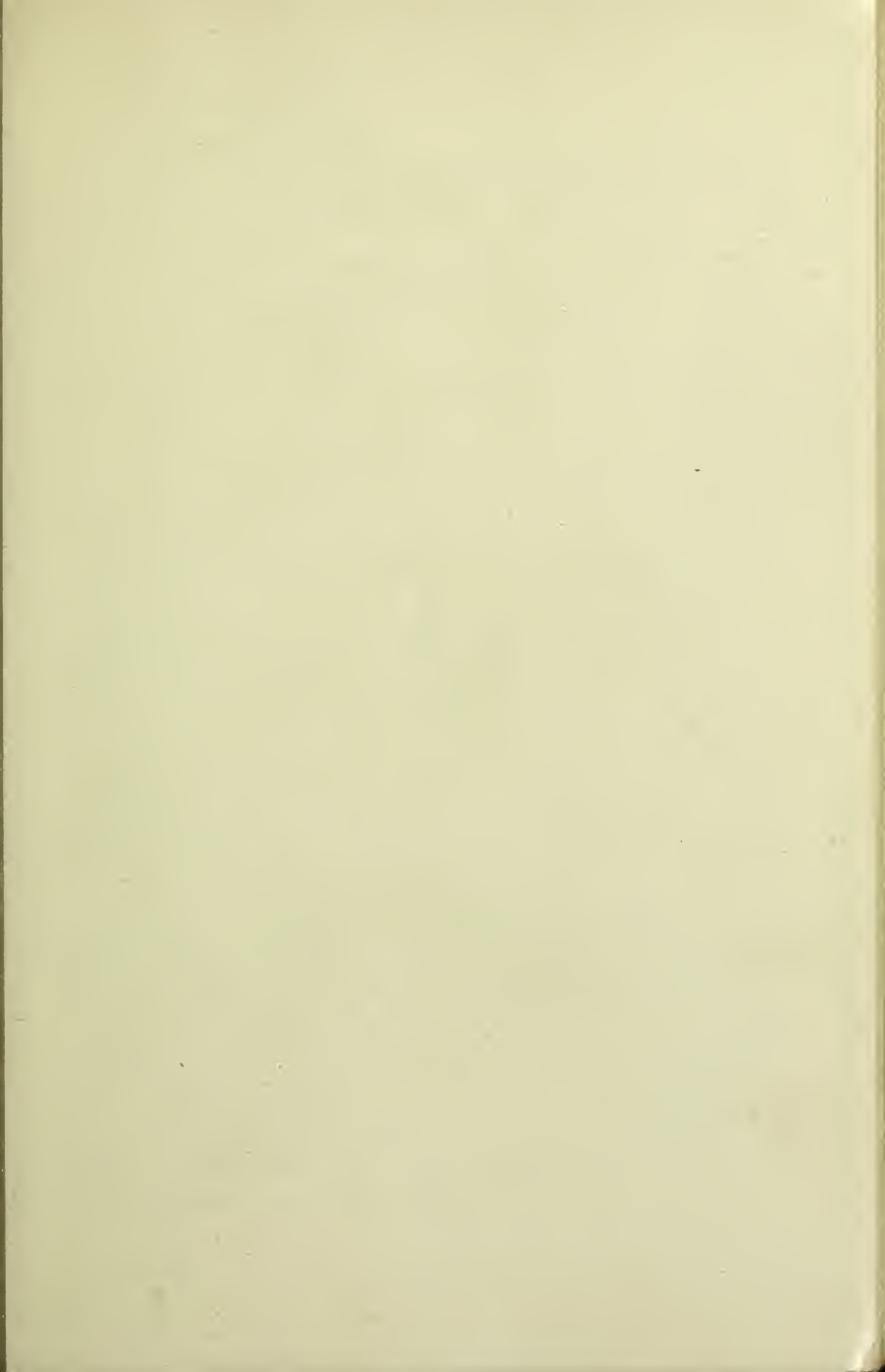
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THE FOUNTAIN OF YOUTH







*PLATE XXV.—SCALP MASSAGE. A. First position; hands in front.
B. Second position; hands at sides of head. C. Third position;
hands at back of head.*

THE FOUNTAIN OF YOUTH

Or
Personal Appearance
and Personal Hygiene

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With One Hundred and Thirty-four Illustrations from Photographs Taken Under the Personal Supervision of the Author.



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To
“*The Most Beautiful of All*”



PREFACE

CENTURIES ago much time was spent in the search for the "Fountain of Youth," for it was thought that the happy individual who discovered and bathed in it would have a renewal of youthful vigor and beauty beyond compare. The less poetical but more practical modern has found that by the use of reason and prosaic methods it is not necessary to wander up and down the face of the earth searching for some hidden spring, to preserve the looks and strength of the years of prime. A proper understanding of the means and a persistent use of them will win the reward. Women who are not naturally endowed with good looks that come from regular features can make themselves attractive in appearance by the employment of simple and healthful measures, which it is as much their duty to employ as to dress well.

The possessor of a fine physique and an attractive face is much better equipped for the rivalries and competitions of life; the chronicles of all ages record that beauty has ever influenced men and leaders of men, and until the end of time they will

PREFACE

remain captives to its magnetic charm. Moreover, it is rare to find anything, which can be properly recommended to improve the looks, that ministers to vanity only and will not benefit health as well. Beauty depends upon the normal action of the heart, a perfect circulation, a proper digestive apparatus, muscles rightly developed, and brain and nerve activities that are normal. The imperfections of any of these are soon shown in the face.

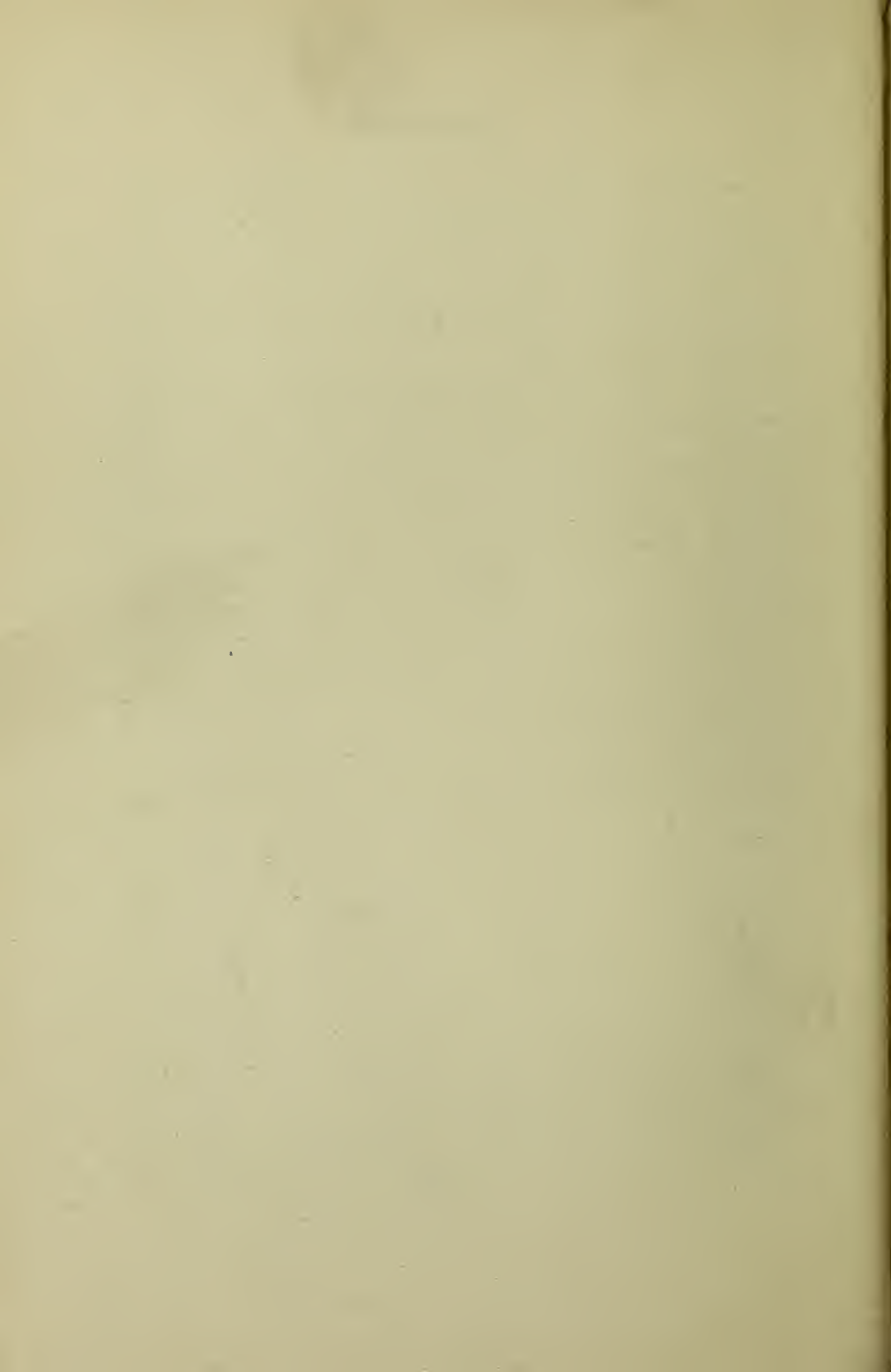
The chapters of this book are in the main taken from a series of papers recently published in *The Delineator*. They are designed to give simple, precise and practical directions for the care of the person. The aim has been not to describe processes and measures which one is to receive at the hands of another, but to give instruction in that which can be done by one's self. In other words *self-help* has been the precept constantly kept in view. Personal appearance and personal hygiene are neglected for several reasons. First and foremost because of ignorance upon the subject. Secondly, because of the idea that it takes a great deal of time, and thirdly, because it is costly to take "treatments." It is therefore first of all essential to learn how to do that which is necessary, and then the fact will quickly be recognized that it does not take so very much more time, if indeed any more, to do properly that which is required. Many

PREFACE

undertake baths, massage, physical culture and the like and expect results in a few weeks, but these things must become a part of the daily routine, just as much as dressing. To correct imperfections and maintain healthy conditions, diligence and persistence are demanded.

In order that the various methods and recommendations should have value, the author besides drawing on her own experience has consulted a great many books in French, German, and English, has read numerous articles and monographs, has availed herself of suggestions and the results of experiments of friends, patients and physicians. In making the illustrations she has always had present an expert who would be able to detect anything false or impracticable.

New York, 1905.



CONTENTS

I.	INTRODUCTORY	. . . . .	1
II.	THE FACE	. . . . .	22
III.	THE COMPLEXION	. . . . .	33
IV.	THE EYES	. . . . .	44
V.	THE EARS AND THE NOSE	. . . . .	55
VI.	THE MOUTH AND TEETH	. . . . .	67
VII.	THE CARE OF THE VOICE	. . . . .	78
VIII.	THE NECK AND ARMS	. . . . .	83
IX.	THE HAIR	. . . . .	97
X.	THE HANDS AND FEET	. . . . .	111
XI.	THE USE AND ABUSE OF COSMETICS	. . . . .	122
XII.	BODILY SYMMETRY	. . . . .	134
XIII.	OBESITY	. . . . .	145
XIV.	PHYSICAL CULTURE	. . . . .	159
XV.	DRESS	. . . . .	170
XVI.	THE SPIRIT AND THE BODY	. . . . .	182

LIST OF ILLUSTRATIONS

PLATE XXV.—SCALP MASSAGE. A. First position ; hands in front. B. Second position ; hands at sides of head. C. Third position ; hands at back of head - - -	<i>Frontispiece</i>
PLATE I.—FACIAL EXPRESSION. A. Unconscious relaxation of the features. B. Unconscious tension of the features. C. and D. Unconscious grimaces - - -	<i>Facing page 22</i>
PLATE II.—HOW TO WASH THE FACE. A. Dipping the hands in the water. B. Begin at the forehead. C. Wash the sides of the face. D. Next comes the nose - - - - -	“ “ 26
PLATE III.—HOW TO WASH THE FACE—CONTINUED. E. The palms of the hands for the cheeks. F. A circular motion about the mouth. G. At the back of the neck. H. Upward sweep for chin -	“ “ 28
PLATE IV.—A. Using the complexion brush. B. A comedone extractor -	“ “ 34
PLATE V.—A. Hot applications to the face. B. Steaming the face with improvised apparatus - - - -	“ “ 38
PLATE VI.—MASSAGING THE FACE. A. Massaging the forehead. B. Smoothing out wrinkles. C. Getting rid of crow's feet. D. Kneading the cheeks - -	“ “ 40
PLATE VII.—MASSAGING THE FACE—CONTINUED. A. First movement to prevent sagging of the muscles of the face. B. Second movement. C. Thumbs for the chin. D. First and second fingers at the back of the neck - - - -	“ “ 42

ILLUSTRATIONS

PLATE VIII.—THE USE OF THE EYE CUP.			
A. First position.	B. Second position,	<i>Facing page</i>	44
PLATE IX.—A. Massage for puffiness under the eyes. B. Massaging the eyeballs - “ “ 48			
PLATE X.—A. Training the eyebrows. B. Training eyelashes - - - - “ “ 50			
PLATE XI.—A. Device for binding the ears closely to the head. B. The new-fashioned ear trumpet - - - - “ “ 56			
PLATE XII.—Various devices for improving the hearing - - - - “ “ 60			
PLATE XIII.—A. A nose clip. B. and C. Shaping and massaging the nose - - “ “ 62			
PLATE XIV.—CORRECT WAY TO BRUSH THE TEETH.—A. Selecting the brushes. B. Brushing the inside of the lower teeth. C. Brushing the inside of the upper teeth - “ “ 68			
PLATE XV.—CORRECT WAY OF BRUSHING THE TEETH—CONTINUED. A. First movement. B. Using the other hand for opposite side. C. Turn the wrist to sweep brush downward - - - - “ “ 72			
PLATE XVI.—A. and B. Cleansing the side of the teeth with a narrow ribbon. C. Faulty articulation. D. A perfect set of teeth showing correct articulation - - “ “ 76			
PLATE XVII.—A. A relaxed and fatty chin. B. One way to remedy it - - - - “ “ 84			
PLATE XVIII.—Exercises most beneficial for remedying the chin and for making the neck shapely - - - - “ “ 90			
PLATE XIX.—A. Massaging the neck. B. Using flesh brush to reduce size of arm - “ “ 92			

ILLUSTRATIONS

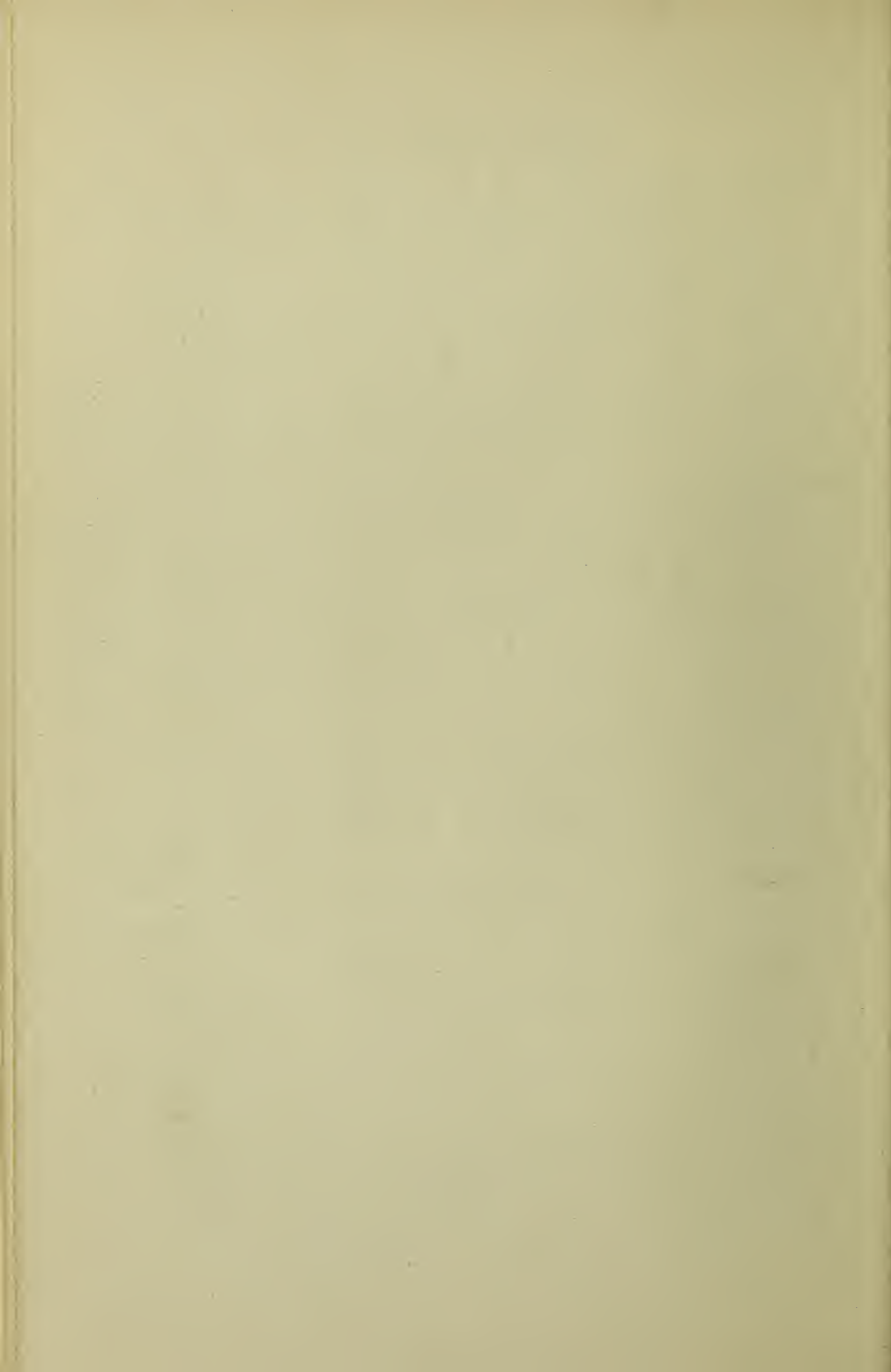
PLATE XX.—ARM MASSAGE. A. Grasp- ing the arm, use a twisting, wringing mo- tion. B. Moving the flesh up and down on the arm - - - - -	<i>Facing page</i> 94
PLATE XXI.—SHAMPOOING THE HAIR. A. The shampoo brush. B. Washing the hair - - - - -	“ “ 98
PLATE XXII.—SHAMPOOING THE HAIR— CONTINUED. A. Rinsing the hair. B. Wringing the hair preparatory to drying it	“ “ 100
PLATE XXIII.—SHAMPOOING THE HAIR— CONTINUED. A. Drying with a towel. B. Fanning to hasten drying. C. Straight- ening the hair with the comb - - -	“ “ 102
PLATE XXIV.—BRUSHING AND COMBING THE HAIR. A. The wrong way to use a brush. B. The wrong way to use a comb. C. Correct way to comb out tangled hair -	“ “ 104
PLATE XXVI.—A. Singeing the hair with lighted taper. B. Clipping the hair -	“ “ 106
PLATE XXVII.—CORRECT MANICURING. A. Softening the nails. B. Important point in caring for nails. C. Trimming the nails with curved scissors - - -	“ “ 112
PLATE XXVIII.—CORRECT MANICURING— CONTINUED. A. Using the polisher. B. Loosening the cuticle. C. Filing and beveling the nails with emery board. D. Use of the nail brush - - - - -	“ “ 114
PLATE XXIX.—CORRECT MANICURING— CONTINUED. A. Final polish with the hand. B. Correct trim. C. White spots caused by improper manicuring - - - - -	“ “ 116
PLATE XXX.—A. Removing a corn. B. Bandaging the feet with adhesive plaster. C. Caring for ingrowing toe-nail - - -	“ “ 118

ILLUSTRATIONS

- PLATE XXXI.—A. Correct trim for toenails. B. Bunion and corn plasters. C. Instrument to remedy bunions - - *Facing page 120*
- PLATE XXXII.—A. Exercise for grace and poise. B. Exercise for development of chest and bust; first position. C. Second position - - - - - “ “ 134
- PLATE XXXIII.—EXERCISE FOR LENGTHENING THE WAIST-LINE AND REDUCING ABDOMEN. A. First position. B. Second position. C. Third position - - - - - “ “ 136
- PLATE XXXIV.—EXERCISE FOR STRENGTHENING AND DEVELOPING MUSCLES OF THE TRUNK. A. First position. B. Position for second and third movements. C. Fourth position. D. Fifth position - - - - - “ “ 140
- PLATE XXXV.—EXERCISE FOR REDUCTION OF HIPS AND ABDOMEN. A. First position. B. Second position - - - - - “ “ 142
- PLATE XXXVI.—EXERCISE FOR REDUCTION OF ABDOMEN AND STRENGTHENING THE LOWER EXTREMITIES. A. First position. B. Second position. C. Third position - - - - - “ “ 146
- PLATE XXXVII.—A. Correct position in standing. B. The running exercise - - - - - “ “ 148
- PLATE XXXVIII.—THE ACT OF WALKING. A. First position. B. Second position, - - - - - “ “ 162
- PLATE XXXIX.—EXERCISE WITH BARBELLS. A. First position. B. Second position. C. Third position - - - - - “ “ 164
- PLATE XL.—Showing how swimming develops all the muscles of the body - - - - - “ “ 166
- PLATE XLI.—CHARACTERISTIC POSITIONS IN FENCING. A. The salute. B. The lunge. C. The recovery - - - - - “ “ 168

ILLUSTRATIONS

- PLATE XLII.—EFFECT OF HIGH HEELS UPON THE FEET. (Photographed through glass.) A. Natural position of naked foot when standing. B. Photograph of both feet taken together, and with high heel shoe, the other naked, supported at the same height - - - - - *Facing page 176*
- PLATE XLIII.—EFFECT OF HIGH HEELS—CONTINUED. A. Side view of feet shown in Figure B, Plate XLII. B. Walking shoes with heels that press up the arch of the foot - - - - - “ “ 178
- PLATE XLIV.—HOW STOCKINGS SHOULD BE FITTED. A. Properly fitted stocking. B. Stocking too short and narrow, pressing upon and deforming the toes - - - - - “ “ 180
- PLATE XLV.—A. Wrinkling the forehead. B. Removing wrinkles with adhesive plaster. C. Removing wrinkles and supporting a flabby chin with adhesive plaster “ “ 184
- PLATE XLVI.—A. Removing “crow’s feet” with adhesive plaster. B. Drooping corners of the mouth raised by adhesive plaster. C. Examining to find deposit of fat at corner of mouth. D. Massaging to remove the fat - - - - - “ “ 188
- PLATE XLVII.—CORRECTING ROUND SHOULDERS AND DEVELOPING THE CHEST. A. Front view. B. Back view - - - - - “ “ 190
- PLATE XLVIII.—A. Natural position for sleeping. B. Wrinkles formed by pushing up the cheek while sleeping - - - - - “ “ 192



The Fountain of Youth

CHAPTER I

INTRODUCTORY

THE very words "Fountain of Youth" take us back to a romantic and entrancing era in human thought, when, untrammelled, and unguided by the leading-strings of scientific fact, Fancy roamed at her own sweet will. It takes us back to the time when astronomy was astrology; when chemistry was alchemy; when philosophy, not plodding along the lines of pure reason, soared aloft on the wings of thought into the realm of magic. The every-day world of those centuries preceding the Renaissance may be called the Dark Ages by some; but, it was a period when the desires of men announced themselves emphatically, and the wish to gratify them led many a one to carry on the mystic search with cabalistic symbols and crucibles, the contents of which simmered over laboratory fires whose costly smoke ascended to heaven night and day.

THE FOUNTAIN OF YOUTH

First of all, men desired riches. Then, as now, they recognized the fact that wealth was the key to unlock the doors of power and pre-eminence. "Gold!" cried the alchemist. What a triumph would it be if one could transmute into gold these base metals which are so common. Shutting himself up in his laboratory with mystic lore derived from Arabian philosophers, and with the various minerals on which to experiment, he labored day and night to discover the philosopher's stone by which, with a Midas touch, everything could be changed into the most precious metal of all. Kings and queens gave money freely in order that success might crown such endeavors, and nobles, bitten with this fever as is the gambler with his passion for gaming, staked all their possessions and the inheritances of their children to carry on the mad search. In this quest men lost youth and strength, and, immured within their secret chambers, bending over their crucibles and inhaling noxious odors, grew old and withered before their time.

But it was not alone the search for riches that engaged the alchemist. Alchemy was but the symbol of a threefold quest,—a search for the means of benefiting humanity by restoring lost physical strength and well-being, a search for spiritual development, and a search for the methods of transforming the base metals into the nobler ones.

INTRODUCTORY

What were treasures and gold without health to enjoy them? Therefore, coincident with the search for riches must be found the elixir of life,—the means for so restoring the human organism and reinforcing its powers, that they would increase instead of failing. Otherwise of what use would be the discovery of the philosopher's stone?

The history of medicine is at once interesting and dreary. We find so much ignorance, so much absurdity in the use of loathsome things in the *materia medica*, such a combination of religious superstition (for the priests supervised the affairs of medicine as they did everything else), that man can exercise little patience in its consideration. Seeing that the so-called secrets of Nature were in many instances not secrets at all, but were so evident that he who runs might read, it seems strange that but one or two persons in a century had sufficient intellect to see a small fraction of the truth. A Hippocrates, a Galen, a Lavoisier, a Roger Bacon, a Linnæus, a Harvey, a Galvani would occasionally throw the light of the torch of Truth into the darkness, thus faintly illumining the night of ignorance until the dawn of science appeared, ushering in the day which we now enjoy.

The potion which was to prolong life indefinitely and remove the ravages of time was eagerly sought in the laboratory. Indeed, Paracelsus (1527) spoke

THE FOUNTAIN OF YOUTH

with contempt of those who spent their time solely in the quest of gain. He says :

“Away with these false disciples who hold that this divine science, which they dishonor and prostitute, has no end but that of making gold and silver. True alchemy has only one aim and object : to extract the quintessence of things and to prepare arcana, tinctures, and elixirs that may restore to man the health and soundness he has lost.”

Paracelsus claimed that he had discovered the elixir of life in the tincture or preparation of gold, to which he gave the name of “alcahest.” Yet he died young,—in his forty-eighth year,—and the historian speaks derisively of his boasted attainments, which proved unavailing to save his own life. Mercury and gold dissolved in nitro-muriatic acid were used by Bovius, who gave to the mixture a fanciful name according to the custom of the times, calling it “Hercules.” It was the tincture of gold that formed such a powerful agent in the hands of Roger Bacon (1214) three centuries before. In spite of these potent preparations men succumbed to fevers and to plagues, and did not even live out their allotted span of life, much less increase the length of their days over those who had preceded them. Nevertheless, the firm conviction remained that somewhere existed the magic draught which would confer on mankind this greatly desired boon. It is not strange, therefore, that the minds of men, leaving their pitiable gold, forsaking the gloomy and

INTRODUCTORY

mysterious laboratories, should at last seek longevity where they would be more likely to find it in some shady pool or up-welling spring in the beautiful woods. It is a relief to think of this turning toward Nature's hydrotherapy, rather than of the continual brewing of those disgusting mixtures concocted of the skins of vipers or the powder of spiders, or the "Eye of newt and toe of frog."

It would be well if to-day there existed a like faith which would take us through the length and breadth of the land, seeking to discover the hidden spring. What a charm would there be in going about, testing this or that, hope ever springing fresh in the breast as, wandering through virgin forest, some spring would appear; and when thirst had been quenched and the bath had been taken and no change resulted, still testing and experimenting again and again though without success, the feeling of disappointment being tempered by the fact that the quest still existed to lure one on. In those olden days those who felt called to make the search had before them so many unexplored countries, that the zest of the adventure in itself could not be other than health-giving and life-prolonging. They could sing with the poet,

"Give me to learn
Spirit of the wood, where 'mid the tender fern
Lies the enchanted pool ; give me to sip
Where yet no weary mortal has set lip,

THE FOUNTAIN OF YOUTH

And put far off the hour of age from him,
To feel again youth burn in languid limb,
Fire in the failing eye, fire in the breast."

The search for the Fountain of Youth may have been a failure, but as in the world of matter nothing is ever lost, no force goes astray, so is it true of the world of thought. No mental effort is wasted. Study the progress which thought has made in any direction, and it will be seen that every thinker, every experimenter (though in the light of modern discovery it may not at first seem so) has hewn out a step, has added a round to the ladder which brings us nearer to the solution of the problem and the discovery of the truth. So it was with these fanciful alchemists and seekers after lasting youth. They provided steps upon which succeeding generations mounted ever upward. They failed to prolong the life of man or to revive in the aged the enjoyment of anything like youth. Indeed, as has already been seen, the lives of those men who claimed to have discovered the panacea were rather shorter than those of their comrades. Singularly enough, the preparations of gold upon which they relied are to-day considered by the medical profession to be powerful nerve stimulants, and the introduction of the "gold cure" for inebriety has become a matter of common knowledge. In like manner the mercury which they used so extensively had doubtless a great

INTRODUCTORY

effect in that dreadful disease of unmentionable name, which was first recognized in the time of Paracelsus, the hideous scourge which leaves its mark even to the third and fourth generations, and which is now mitigated or cured by the same metallic agent. The same is true of many other herbs, drugs, and metals (arsenic, opium, and the like), which they used in their blind gropings and which science to-day handles with skill and accurate knowledge. Similarly, in the numerous medicinal springs which abound throughout the world, have been found the means of healing and of prolonging life. Thus it is that a germ of truth can generally be discovered in any superstitious or quackish practice, whether described in the past or existing at the present day. The greatest good done by the investigators in the field of alchemy was the laying of the foundations of modern chemistry, while those who undertook the quest for the Fountain of Youth not only obtained for themselves the joy and inspiration of the search and its accompanying health, but they discovered new lands, filled in the blank places of the maps, and, thus adding to the knowledge of the world, constructed a temporary scaffolding upon which the next generation mounted to a higher outlook over the plains of research.

The subject would be merely one of pleasing interest in the history of events, a shadow playing

THE FOUNTAIN OF YOUTH

upon the human panorama of the past, a simple adjunct to that subject of wider scope and deeper import, alchemy, and hence unworthy of holding the attention for more than a few minutes, were it not contrasted with the attitude of the human mind of to-day and its symbolism interpreted. The human brain of the present time is of the same mould as that which existed in centuries gone by, when astrology governed births and deaths and the affairs of men, and when reliance was placed upon magic. We are all more or less superstitious and dearly love to be. We would much rather be healed by the waving of hands and muttered abracadabras than by what is considered thoroughly scientific in the schools.

The old alchemists thought that the metals were sentient and living beings, and that their gases were the souls which they permitted to escape. Are we any better off with our atomic and molecular theories? Will not these also prove only hypotheses, scaffolds by which we may mount to higher and greater truths of things animate and inanimate? We ourselves know that, since the subject of chemistry was first presented for our youthful study, changes so radical have resulted from the investigations of science, that, had not a kindly Providence erased, through lapse of time and our childish lack of understanding, much of what we then learned, we would have been obliged to have exter-

INTRODUCTORY

minated, root and branch, all the so-called facts and deductions of those early lectures and lessons.

Another decade passes and still another revolution. I can recall at least three such. We stand to-day on the verge of such a scientific upheaval that little will remain of the old natural philosophy and chemistry. The discovery of liquid air has overturned all our notions of heat and cold; the discovery of the Roentgen ray has upset the theories of substances transparent and opaque. Another marvel, radium, a substance which carries within itself the power of renewal of force, would almost incline us to turn back to the belief of the old alchemists that metals are living bodies. Surely a new era is dawning, in the light of which our present scientific theories and discoveries will soon seem hardly less crude than those of the time when the quest for the Fountain of Youth was undertaken so seriously, in order, literally, to find the healing waters. Hardly had the marvels just mentioned been discovered, than the whole medical world at once brought them into use in alleviating suffering and prolonging human life.

Have we, however, with all the means at our disposal of understanding the human body, been able to lengthen the life of man? By dissection and experimentation we have come to know the innermost secrets of the human mechanism, and our eyes have

THE FOUNTAIN OF YOUTH

been so increased in power by the aid of the microscope that we can see and know the actual workings of the mechanism, while the scientists of preceding ages could only guess at them. By the investigations of the laboratory hundreds and hundreds of remedies have been devised to combat disease. Every known land produces some herb or fruit for the healing of the nations, and yet man lives out only the usually allotted span of "threescore years and ten," even as he did in the Middle Ages, or, indeed, in the time of the Psalmist. Even "if by reason of strength they be fourscore years, yet is their strength labor and sorrow." For the preservation of the human species a desire to live has been implanted in the breast of man, otherwise many more persons would commit suicide, because of distress and privation than now terminate their sufferings by voluntary methods.

Man investigates and writes down the life history of plants and animals and knows the time of their growth, maturity, and passing away. Man is but one of Nature's manifestations, and his life history, his epochs are as well defined as those of plants and the lower animals. He cannot alter them by drinking at any symbolical or literal Fountain of Youth, but possibly, if the processes so admirably adapted and understood by horticulturists and breeders of animals were practised and applied to man, the

INTRODUCTORY

years of his life might be lengthened in the same manner as the enduring qualities of animals are increased.

Consider the genus *Homo* for a moment as if he did not belong to the human race. The period of his prenatal life — nine months, or 280 days of ten lunar months — is a physiological fact so certain and fixed that the laws of legitimacy in France and Prussia allow only twenty to twenty-two days more. The periods of infancy, childhood, youth, maturity, and old age are as definitely determined. The characteristics of these periods are fixed and certain. The clothing of the growing child can be made to fit in the factory because of the known proportion of its years. Its mental progress can be measured with as much certainty as its physical progress. Tastes, desires, and actions vary with the years and mark a progression, a life history just as plainly as do the changes in the leaf, the bud, the blossom, and the seed of the plant. It would be as absurd to look for a variation of tastes, habits, and inclinations in the human plant as in the other. The tender green leaves that issue from the expanding bud in spring correspond to infancy and childhood in the human race. The beautiful sheen that marks the perfected leaf in June announces the end of the period of growth, — the end of youth in man. When summer has hardened and toughened the fibre

THE FOUNTAIN OF YOUTH

of the leaf, its full maturity has been reached. With the advent of autumn, the end approaches, and the brilliancy of maturity is succeeded by the drying and withering of the leaf. Having lived its life, it floats downward to the ground, and we expect nothing more of it, though we are as sure of its progress as we are certain that with the coming spring another set of leaves will replace those just dead. Occasionally one of the human species lasts longer than the rest, perhaps reaching ninety, a hundred, or even greater number of years, but these cases are exceptional. An Italian authority has estimated that out of one hundred thousand persons but three will reach the age of one hundred and five.

But while the years of life have not been increased, the power of those years has been vastly enhanced, the output of the individual in labor is greater and better to-day than ever before, and the percentage of deaths for the different periods of life has been greatly changed for the better. Infant mortality, formerly so great, has been largely decreased; the contagious fevers have been controlled; the cases of croup and diphtheria have been lessened in number as well as in fatality; and the feeding and rearing of infants and children have been studied with the result that a much larger number arrive at maturity than ever before.

INTRODUCTORY

The study of hygiene in the homes, the institution of health boards to care for the cities, and the establishment of quarantines to protect the entrance of diseases into the various countries, have added untold years to the sum total of humanity. The advance in medicine has been beyond calculation, but it is not to be compared with the advance made in surgery. Modern surgery is a marvel of the age. No one can compute the number of valuable lives that are saved annually by its agency,—lives not alone of children, but of those whose powers and attainments add greatly to the advancement of the community. The discoveries of analgætics and anæsthetics, by which pain is relieved and insensibility is produced, have made it possible to undertake and to carry to successful conclusions operations which had never before been performed. Yet these discoveries alone would not have made such results possible, had it not been found that absolute cleanliness was the great secret of successful surgery.

Not only have the sick and wounded or those in need of surgical aid been helped by the physicians and surgeons of to-day, but almost every person has in some degree discovered a method of regulating and living his allotted life, so that his powers do not decline with the years. Not so long ago old age was a cult. The grandfathers and grand-

THE FOUNTAIN OF YOUTH

mothers of former generations dressed and acted their parts. Venerable and venerated, they were placed in comfortable armchairs in chimney corners to await their release from life. But no longer do we see the symbolic valetudinarians except upon the stage or in remote rural districts. A recent fashion magazine committed an anachronism in publishing "fashions for the elderly." Where is the woman who would think that such were appropriate for her. Not in vain has the doctrine been preached that a woman is as old as she feels. The lesson has been taken to heart, and women are young to-day because they are determined to feel young. They have broadened their lives and their interests.

The requirements at the present time for even a general education are appalling. The knowledge necessary for the utilities; the keeping pace with an ever-increasing literature; the comprehension of the sciences and the daily discoveries which appeal to the mind; the power to cope with the facts presented in the newspapers, especially the Sunday editions with matters from every department of human knowledge from every remote quarter of the globe,—are some of the every-day exactions of living. The lash embodied in the fear of "getting behind the times" is ever ready to scourge and urge us on. Dr. Bandaline says: "Modern man

INTRODUCTORY

can do in ten years more than his ancestors could in a century."

The biologist in his laboratory is to-day seeking, in his own special manner, for the secret of perpetual youth, and, on the hypothesis that a human being is not an individual entity, but an army corps, so to speak, of which the individuals are the minute microscopic cells of the various tissues, organs, and fluids of the body, he deduces the theory that if equilibrium could be maintained between these, degeneration of the tissues would not take place and senility would not result. "Restore this equilibrium," says Metchnikoff, "and you will take away the dread of death." He and a number of other scientists are experimenting and investigating to discover the changes in the minute cells of the body which cause the difference between youth and old age and are attempting to find the means of destroying the cells adverse to advancement and to improve those which show signs of degeneracy,—in fact, to render these minute cells capable of maintaining, throughout the existence of the individual to whom they belong, the same condition which exists when the individual is in his prime. Could this be done, why, then, should not the individual live as long as he pleases?

The great difference between the quest of the Fountain of Youth of to-day and that of earlier

THE FOUNTAIN OF YOUTH

times emphasizes the vast change in the attitude of humanity towards every event of life. Up to the beginning of the nineteenth century physical force was paramount; the might of the arm made the right of success. The man that could vanquish his opponent in physical combat was the one who triumphed. To-day it is the man of brain that achieves things. When Ponce de Leon began his celebrated search for the life-giving fountain which brought him to the lovely shores of Florida, there were few writings on the care of the body. Traditions had come down from Hippocrates and Galen, but the "Seven Golden Chapters" and the "Emerald Table" were the sources of medical knowledge for those who could interpret them. The "Rosa Anglica" was the fanciful name given to the principal work for the instruction of the English. At present each of the three hundred and sixty-five days of the year sees a medical work issued from the press. Every one realizes that it is not magic, not an elixir, nor yet some welling fountain that will restore and preserve the powers of the body, but it is the action of the mind, the ability of each one of us to see that the human machine is kept in perfect condition. Yet we know that we are subject to Nature's immutable laws, those of growth, of maturity, and of degeneration. Who, in the course of his or her life does not wish for some

INTRODUCTORY

means of staying the irresistible hand of time. We ask with Faust,—

“Has neither Nature nor a noble mind
A balsam yet devised of any kind?”

Mother earth calls to her children to come back to her from time to time if they would maintain their strength. There was great wisdom and truth in the mythological story of the giants who renewed their strength sevenfold every time they touched the earth. Investigation, however, has proved that it is not the farmer living among his kine who has the greatest span of life. It is an existence which calls into action the powers of the mind, the attrition of mentality with mentality, which keeps the human organism alive and brings it to its perfection. This is the Fountain of Youth for the people of the twentieth century, which makes it possible to fill full the measure of achievement.

The influence of mind which is the crowning attribute of mankind of the present generation is overturning the old order of things, and if this influence is so powerful as regards the individual as has already been suggested, how much greater will be its effect upon nations, which are collections of individual units. The strengthening of one will be the strengthening of all. It is not chimerical to say that war will soon be an anachronism. The useless and worse than useless expenditure of life in battle

THE FOUNTAIN OF YOUTH

will be done away with. Not because men will yield on account of the high moral grounds which ought to influence them, but because modern invention will have destroyed the possibilities of war. Forty years ago there was some chance for strategy and for trials of skill and strength. To-day, with smokeless powder, high-tension explosives, enormous guns that can carry tons of destructive missiles, mines and torpedoes which can be fired by means of electric batteries, it no longer becomes a contest of man with man, but one to be decided in favor of the one who can first apply the spark to the dynamite that will blow up the fort, or connect the electric wires that will explode the torpedo under the keel of the battle-ship. So-called "humane" bullets have been invented,—such as will make the cleanest and speediest wound with the least pain. The modern soldier, instead of being protected by shield and helmet, carries in his pocket a little package designed to render "first aid to the injured." When wounded he staunches the flow of blood with aseptic gauze and bandages and carefully protects the injury from outside contamination. By this means alone the mortality of the wounded in battle has been greatly reduced. In olden times the letting of blood by means of the lancet was well-nigh the universal practice for the relief of fever and for many other diseases. To-day

INTRODUCTORY

the use of the lancet for such purposes is almost entirely if not quite abolished. Shortly it will be recognized that blood-letting among nations is as useless as was the process among individuals. Diplomacy will be the method of adjusting national differences, and the cry, "To arms!" will give way to a demand for arbitration.

We have been told that if the ranks of humanity were not decimated by plagues and wars the population of the earth would become so numerous that it would be impossible to find room for the quickly multiplying millions of the human race, but this possibility is so remote that it cannot now be deemed a subject for consideration.

The matter of most importance to all of us as individuals is the question of how to increase our powers, for this is what is symbolized by the search for the Fountain of Youth. It cannot be gainsaid that none of us makes the most of himself or herself mentally or physically. We seem to lose judgment when running our own machine. Few know how to carry out properly the simplest rules of personal hygiene. In fact, the influence of the so-called Christian maxims which led one to despise the body has had a deleterious effect upon the race. It is with apologies and a certain shamefacedness that one undertakes those rites of the toilet which tend to improve one's personal appearance, but there is

THE FOUNTAIN OF YOUTH

scarcely anything that can be done to improve it which will not also benefit the health. The idea of regarding the body as "vile" was the reaction from the worldliness and vanity of bygone years which the religionists observed. It is the bounden duty of every one to make the most of the mechanism which is the manifestation of his or her presence upon earth.

Next to bodily hygiene comes mental hygiene. This is a most complex matter. The mind must control the desires and appetites, a point wonderfully illustrated by Balzac's "*Peau de Chagrin*" ("The Magic Skin"), in which an unfortunate youth who was ready to commit suicide became the possessor of a magic skin which would give him everything he wished; but every time his desires took form the skin would shrink, and when at last it could shrink no more his life was forfeited. The story has become a classic because it so perfectly typifies the effect of consuming desire upon the body. The wish and struggle for riches, for social position and distinction, the indulgence of the passions and appetites, cause the shrinkage of the scroll of life.

If one would live long he should have the calmness of a philosopher, otherwise the strain and burden of worry and haste find its action recorded on that sensitive machine upon which our very life depends,—the heart. It is difficult for any one of us

INTRODUCTORY

to regulate our lives. We are blown upon by winds from every quarter of the earth, and we turn in response to them like the weathercock on his lofty perch. The great problem to be solved is how we may so adjust ourselves to circumstances that our brains may act to their best and fullest capacity. It would seem that the difference between the wise and great and those not so wise and great, is the power possessed by the former of making this adjustment. It behooves us to study our individual mechanism with this purpose in view, and in this modern search for the Fountain of Youth we should not lose sight of the fact that the quest must be made with due regard to the laws of nature, or else we shall be found in the position of trying to gather grapes of thorns and figs of thistles. Carefully winnowing the wheat of actuality from the chaff of custom and tradition, we should fit ourselves to the epoch of life to which the revolving wheel of time has brought us, not lamenting the vanished characteristics of youth, but remembering that each period of life has its usefulness, its pleasures, its advantages, its privileges, so that when the summons comes, we will be ready to go

“Not like the quarry-slave at night,
Scourged to his dungeon ; but sustained and soothed
By an unfaltering trust, approach the grave
Like one who wraps the drapery of his couch
About him, and lies down to pleasant dreams.”

CHAPTER II

THE FACE

UNDERLYING the features is a series of bones which determine the general configuration of the face and which the individual cannot change. By running the fingers over the face it can easily be felt where these come to the surface, and it will be found that they make the outlines of the forehead, the circular orbits of the eyes, the prominences of the cheek bones, the bridge of the nose and the outlines of the jaw. This bony framework is beyond the power of the individual to change. One can get control of the muscles which are attached to the bones and bring them under the will.

The fat that fills in the spaces between the muscles and is wrapped over them can be increased and diminished by well-directed efforts. The texture and color of the skin may be changed, improved and brought to perfection. The features of the face are formed by the union of the bone, muscle and fat. The muscles determine the expression and may be considered as the strings which are pulled in the response to thought.

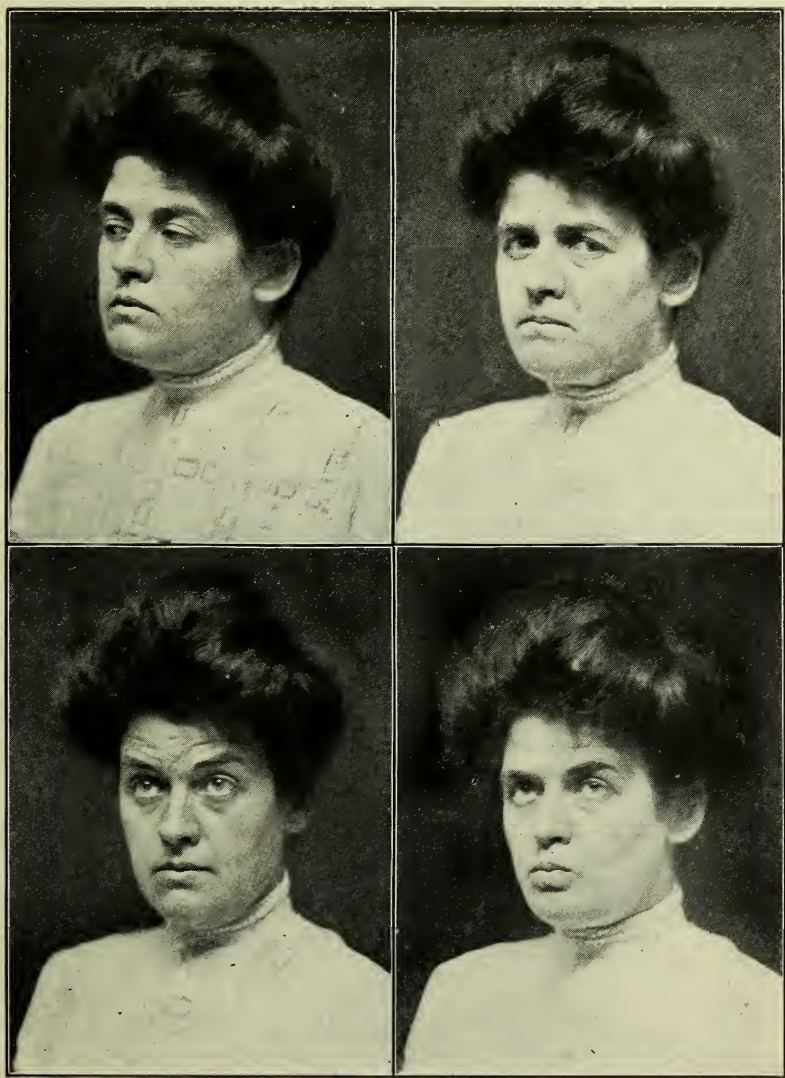


PLATE I.—FACIAL EXPRESSION. A. Unconscious relaxation of the features. B. Unconscious tension of the features. C. and D. Unconscious grimaces.

THE FACE

Very little attention is paid by individuals to the expression of their faces, yet many who have regular features miss a pleasing countenance because of either lack of expression or a faulty expression, while many a face otherwise ugly is lighted up and is remembered with pleasure because of the shining of the light from within.

THE CONTROL OF THE MUSCLES

When one has a machine to manage, it is necessary that he become acquainted with its parts and the methods of action of the mechanism. In order to understand the control of the body there should be a proper understanding of muscular action, but how few there are, out of the medical profession, who have any idea of the mechanism. All the muscles of the body, with the exception of the heart, are under the control of the will, some actively so, others unconsciously so. If the will acting on a muscle exerts more effort than is necessary, the nerve force overflows to the other muscles, which contract in response. Often a person in making a great effort will contract the muscles of the hands, or twirl a button, or twist and screw the features of the face. Over each muscle of the body the brain exercises a constant control, which is relaxed only in profound slumber. In many this muscle tone becomes exaggerated and the individual goes

THE FOUNTAIN OF YOUTH

about with a tension that entails a great expenditure of nerve force and is a great drain upon the system. A display of this is more frequently seen in the face than elsewhere and results in an exceedingly unbecoming screwing-up of the features. The jaws are set, the forehead is wrinkled, the eyes are squinted. The opposite of this is the complete relaxation of the muscles of the face. The light goes out of the eyes, the cheeks hang flabbily, the corners of the mouth droop and show ugly lines. This unconscious relaxing of the muscles of the face is very apt to occur in people who are not lacking in mental activity and brightness. It is a habit which they have formed, of letting go, so to speak, the necessary control of the features.

GRIMACES

Of the same nature as the tension and relaxation of the features are the unconscious grimaces which the majority of people make, without being in the least aware of it. They have little tricks and mannerisms in which they indulge to the complete destruction of a pleasing appearance. Sometimes every feature in the face, successively or collectively, becomes a storm centre, or it may be only the forehead, which is wrinkled into horizontal lines, giving an anxious expression, or into vertical lines, giving rise to scowls and frowns. The mouth is

THE FACE

subject to all kinds of distortions. It is screwed up or the lips are pouted, or the under lip is thrust forward in an unpleasing manner. Children take up such tricks successively adopting and dropping them, but when grown people have them, they are peculiarities which are not easily disposed of. A best friend would hardly dare to tell you that you were wrinkling your brow or pouting your lips or remind you of these facial peculiarities; hence it is incumbent upon you to discover them yourself and by the process of a little mental training to break yourself of them.

Many persons in talking grimace badly and handicap their conversation thereby. It more frequently happens that the face is distorted in laughing and smiling. A pleasant smile acts like a benediction upon one's friends and acquaintances, and if the countenance in smiling becomes dimpled, it adds greatly to the happy effect—so much so that poets sing of dimples and novelists add them to their heroines' charms. They are caused by the attachment of a portion of the skin to the bones or ligaments beneath the flesh or fat, the surrounding surface being raised and the attached portion forming a depression. Artificial dimples can be made by means of a stitch of the surgeon's needle, fastening the skin to the underlying structures. Sometimes it is successful, and sometimes it is not. It is

THE FOUNTAIN OF YOUTH

ill-advised vanity that yields to such a procedure, however much one covets the cleft in the chin or the dimples in the cheeks.

The mouth is one of the hardest features to manage. It is said to be the feature of all others which reveals the true inwardness of a person's character. Sometimes the faulty closing of the mouth alters the whole appearance of the face, the setting of the lower jaw giving the appearance of a protruding or retreating chin. The position of the chin may also be defective on account of the way the teeth come together when the mouth is closed.

A ROUND AND ROSY FACE

The beauty of the face is due largely to the layer of fat which is spread over the muscles in much the same way as a modeller spreads the clay on the figure he is modelling. The wear and tear of life, the sorrows, anxieties and deprivations play havoc with this fatty interlining, and when the first bloom of youth departs it either wastes away, leaving the face full of hollows and the skin wrinkled, or, as is apt to be the case later in life, it accumulates, adding unsightly rolls to the chin, filling the eye sockets and making the eyes seem smaller and deforming the contours of the cheeks. In both of these conditions much can be done by means of exercises, self



PLATE II.—HOW TO WASH THE FACE. A. Dipping the hands in the water. B. Begin at the forehead. C. Wash the sides of the face. D. Next comes the nose.

THE FACE

massage and the care of the skin to bring about a better condition of affairs.

The color of the face depends upon the healthy condition of the tiny blood vessels which carry the blood to the skin. These form a network throughout the skin, dividing and subdividing until they become so small that they can be seen only by the microscope. To keep these tiny blood vessels in a state of activity, so the blood can flow through them, is the way to preserve the skin. Slowly, as age advances, they wither away, so that the skin is not properly nourished, and that is why the skin in the aged is so colorless and dried up, becoming like parchment. In order to have a fine complexion, it is of the greatest necessity that blood should be brought into the minutest of these tiny blood vessels. They are called "capillaries," because they are like hairs in fineness. The object of steaming the face, of massaging it and of applying electricity is to stimulate the action of these same capillaries. Some persons' cheeks are much rosier naturally than others, which is due to the fineness of the skin, and to the fact that the outer layer of the skin is thinner. This is especially the case with blondes.

THE QUESTION OF SOAP AND WATER

Water is the most universally employed of all cosmetics, and rightly applied it is the best. Not.

THE FOUNTAIN OF YOUTH

withstanding that with the great majority the act of face washing averages more than twice a day, the number who know how to do this correctly is comparatively small. The enemy to a fine complexion is dirt. In no place do complexions suffer so much from it as in the city, especially in those cities and towns where soft coal is burned. In such places it is almost impossible to keep the face clean. Dust, dirt and impurities collecting upon the face choke up the pores of the skin, and interfere with the circulation, making the complexion muddy and causing eruptions. The object of face washing is to cleanse the face perfectly. For this purpose the water must be hot—not warm, but hot. Hot water does not wrinkle the face; on the contrary, it makes the skin soft and pliable, and a good soap, generally such as is free from scent and alkalies, should be used. Different soaps agree with different skins, and they should be selected by the experience of the individual. As a general thing, men's faces show a clearer, better skin than women's, though naturally it is of a coarser texture. This is due to the fact that men use so much soap in lathering for shaving, and the shaving soaps are of much finer quality than most toilet soaps.

Many complexions are ruined by the employment of sponges and face cloths; not that these are pernicious in themselves, but they are not properly



Plate III.—HOW TO WASH THE FACE—CONTINUED. E. The palms of the hands for the cheeks. F. A circular motion about the mouth. G. At the back of the neck. H. Upward sweep for chin.

THE FACE

cleansed after using. They are carelessly wrung out of the water in which they have been used and hung to dry by the wash-stand out of the light. The soap and the impurities of the water remain in them, and as they are used time after time the decayed soap and collected matter is applied to the face and will occasion the appearance of blackheads and little pimples, and the skin will become muddy. A sponge is well enough in itself, the wash-cloth is well enough in itself, but even after being used once the sponge or the cloth should be washed most carefully and, after being rinsed in boiling water, hung to dry in the sunlight and air.

HOW TO WASH THE FACE

It is much better, in cleansing the face, to use the hands and the fingers, for the touch of skin to skin has something peculiarly beneficial. To wash the face, then, let the water be hot and, dipping the hands into the bowl, make them soapy with the chosen soap, care being taken that this is of the best quality and such as agrees with the skin; then the hands should be applied to the face after a regular manner, systematically, using a kind of light facial massage. Dash the water over the face at first, then begin, using the four fingers of both hands; pass them from the middle of the forehead outward with firm pressure and let them rest lightly as they

THE FOUNTAIN OF YOUTH

are brought back again ; do this several times, thus smoothing out the vertical wrinkles.

Next, placing the fingers at the roots of the hair, bring the fingers down to the eyebrows, and as this is repeated several times let the fingers rest lightly on the skin with the upward stroke but exert considerable pressure on the downward stroke, as when the forehead is wrinkled the muscles contract from above. Let the three fingers slide up and down on each temple. Supporting the hands by the forefinger of each hand resting on each temple, use the second and third fingers to pass around in a revolving fashion about the rings of bone which form the outer edges of the sockets of the eyes, using the inner angle of the eye by the nose as the point of departure, and alternating the direction.

The eyes being closed, the eyelids are massaged, and the eyeballs themselves should be carefully rubbed, the forefinger being used for this. Next, supporting the hands by resting a thumb on the lower part of each cheek, use the first and second fingers of each hand to scrub the nose. Probably owing to its prominence and because it is more liberally supplied with oily glands than any other part of the face, it is much more difficult to keep the skin of the nose cleansed and free from blackheads than any other part, so the fingers should be very active and sympathetic in the task of washing this

THE FACE

feature. The greatest pressure should be used in the downward stroke, and the pulpy part of the middle finger should be searching in its work about the nostrils. The cheeks are washed with the palms of the hands; the hands should be applied to the sides of the face with the fingers upward, the lower part of the hand resting on the bones of the lower jaw.

Great care should be taken in using the up and down scrubbing motion to make the pressure heavy on the upward stroke, but very light on the downward, as the tendency of the flesh of the cheeks is to sag as the years pass. Placing the thumbs under the chin for support, the first and second fingers are used to make a circular motion about the mouth, the fingers of each hand describing a semicircle and meeting the other in the middle. With the thumbs remaining in the same position under the chin, the forefinger of either hand may be employed to wash and massage the chin, which is done with a circular motion.

Lastly, the neck and chin are washed. Clasp the back of the neck with both hands so that the fingers touch, then bring the hands forward and down until the finger-tips meet in front. That will bring the back of the hand to the chin on each side. The four fingers are flattened and spread against the chin and in the backward sweep lift the flesh

THE FOUNTAIN OF YOUTH

against the jaw and smooth it out with considerable pressure.

It does not take long to acquire and execute the movements here explained, and if done habitually as one washes the face they will be of vastly more benefit than any general massage given at long and irregular intervals by a professional. In drying the face a soft, absorbing towel should be used. The action of the fingers in washing the face should have brought the blood freely and fully to every part, so that a coarse, harsh towel is not necessary. If the face is not thoroughly dried, the skin will become rough. It is important that the soap which has been used should be thoroughly rinsed from the face before drying.

CHAPTER III

THE COMPLEXION

IT is said by those who ought to know, that a woman's complexion gives her more concern than anything else; and so it should, for no matter how regular the features may be, if the skin is of poor texture, rough and covered more or less with pimples and blackheads, she loses more than half of her good looks. She not only loses the charm of coloring, but she looks unwholesome. It is within the power of almost every one to have a healthy and good skin, provided the person is not suffering from some deep-seated ailment; even so, the face in the majority of cases need not show the trouble as much as it often does.

There is as much variety in the facial skin as in the features, but all may come within the range of health. Some are naturally dark, forming the brunette type, while others are light. If the skin is thin and delicate in texture, it permits the fine capillaries to show more and gives the rosiness that is seen in the skin of children. Because of the constant exposure to which the face is subjected, it is often difficult to keep the skin in a healthy

THE FOUNTAIN OF YOUTH

condition. However, worse than outward exposure are the evils which exist within the individual. Indigestion, constipation, imperfect circulation, write upon the face their evil effects, and, therefore, before attempting any measures directed to the face itself, the system should be in as nearly perfect a state as possible. Overeating and overdrinking coarsen the skin. Every one should be careful in eating to reduce the food to the finest possible state with the teeth. Children should be taught the value of conscientious chewing, and form a habit from which they will not depart when they are older.

FACIAL BLEMISHES

Moles and birthmarks are a sore trial for those whom they disfigure. Their removal must be in the hands of a surgeon or a skin specialist. Birthmarks are of two kinds, the smooth port-wine marks and those which are excrescences of great or small size. The nature of the operation for their removal must be determined according to the individual case. Many birthmarks consist of a bunch of exceedingly fine blood vessels, which require the greatest skill for their removal. They are either destroyed by the use of electrical needles or are cut out. Parents should see that this is done for their children while they are young, when it is



PLATE IV.—A. Using the complexion brush. B. A comedo extractor.

THE COMPLEXION

more easily accomplished. Moles, even when very prominent, may be removed by means of an electrical needle, or they can be cut out, a few stitches bringing together the edges of the wound. If the operation is properly done the scar is scarcely visible. Sometimes the roots of the mole are deep and it is necessary to go below them in order to remove them completely.

The face is frequently disfigured by moth patches and freckles. Many think moth patches are caused by the action of the liver, and so popular and widespread is this notion, that they have received the name of "liver spots." They are due to a deposit of pigment in the layers of the true skin, and in order to remove both freckles and moth patches it is necessary to destroy the outer layers of the skin. This is done by the use of some weak acid like lemon juice; or bichloride of mercury in the strength of five grains to an ounce of distilled water; or colorless iodine may be used, the spots and patches being painted with it until the skin is reddened. Care should be taken not to use either of these irritating applications continuously, but to wait a while after the first application to see if the discoloration is completely removed.

Freckles are one of the curious freaks of Nature. Why they appear in some faces and not in others, or why they come at all, it is not possible to tell.

THE FOUNTAIN OF YOUTH

In the case of freckles, as in that of sunburn, the adage holds true that an ounce of prevention is worth a pound of cure. The face should be protected as much as possible to prevent these troubles. It may be well in passing to say that if one's face burns easily, it should be protected by first using some cold cream or other grease, and then covering the face thickly with powder. If one does not wish to appear in a thick mask thus made, even a little cold cream and powder will help considerably. Wetting the face or washing it immediately after exposure increases the depth and severity of the burn. If it is necessary to wash the face, water as hot as can be borne relieves the inflammation of sunburn.

BLACKHEADS AND PIMPLES

The face has innumerable oily follicles which are provided to keep the skin soft and flexible. If these are for any reason stimulated to too great activity, they make the face shiny and greasy. If the skin is not thoroughly cleansed when the face is washed, the dirt accumulates in these little follicles and by its presence stimulates each gland to renewed activity. Little by little the gland becomes distended and a tiny plug is formed, which, if it remains, will cause still further irritation and will result in a pimple. It will thus be seen how

THE COMPLEXION

great is the necessity of keeping the face perfectly clean, in order to prevent the formation of blackheads. If, after the face is washed, the little black points still remain, take a soft linen cloth or the end of an old towel and with equal parts of cologne and water or of alcohol and water rub them out. If they are too large to yield to such treatment, then they can be removed by a watch-key or a comedone extractor, which is very like a watch-key. It should be placed carefully, so that the comedone comes in the centre of the aperture and then firm and gentle pressure should be made, until the little worm-like contents of the sebaceous follicles are expressed. One should avoid irritating the skin too much; if there are very many blackheads and they are close together, it is better to wait a day before repeating the process.

If pimples appear they should be opened only when they have come to a head, unless they are the very large, red, button-like kind. In such the inflammation is deep-seated, and oftentimes they will not heal until they have been opened. The point of a tiny sharp knife is best to use in opening these acne pimples; failing that, a needle may be employed. If pimples are present, some kinds of astringent applications are good. The recipes and prescriptions that have been recommended are legion, but they should be selected with great care

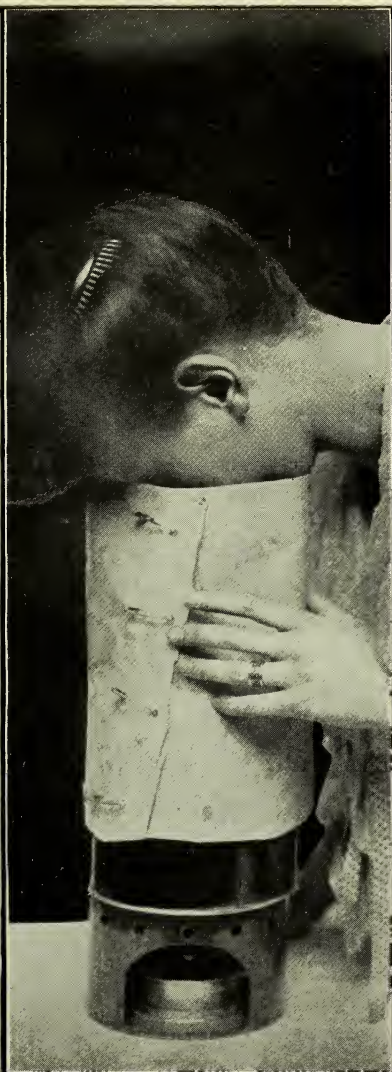
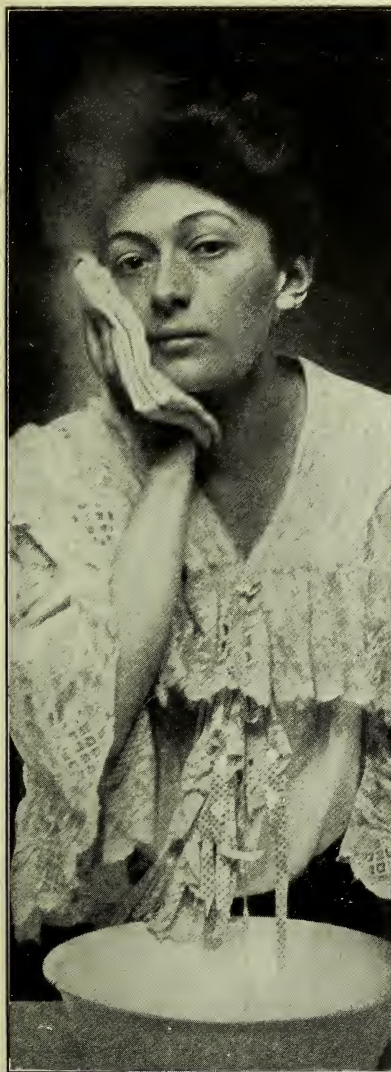
THE FOUNTAIN OF YOUTH

and with a proper understanding, for what is good in one case will aggravate another.

FACIAL TREATMENT

One should understand the individual character of one's facial skin before undertaking any kind of treatment. The thin, delicate skin with its sensitive blood vessels is very different from the thick, muddy skin with its over-developed facial follicles. If the skin is thin and delicate do not steam it or massage it or dry it with powders or astringent lotions. Use some very fine facial cream to prevent such a skin from wrinkling, for that will be its chief danger. It is the thick skin, with the capillaries deep below the surface, that needs stimulation. This can be done by the light massage described in the preceding chapter. If such face washing is practised, steaming the face will not be necessary. Where the face is blotchy and the blood does not seem to circulate properly, hot applications by the means of folded towels wrung out of very hot water and applied to the face for a few minutes may be alternated with those wrung out of very cold water. The whole treatment can be given for ten minutes; after it a facial cold cream may be applied.

The wearing of masks for the benefit of the complexion is a useless martyrdom. The old-time belles



*P*LATE V.—A. Hot applications to the face. B. Steaming the face with improvised apparatus.

THE COMPLEXION

believed thoroughly that it was necessary to suffer in order to have a good complexion. They shut themselves away from the light and air, not knowing that they are Nature's best cosmetics. If you can understand the action of your tiny small facial blood vessels, the capillaries, if you know whether they are doing their work as they should, you will have achieved the mysteries of the care of your complexion. If they are wide open, bringing too much blood to the face, you can see what folly it is to stimulate them by massaging, steaming or other means; but when they are sluggish in their work, the oil follicles do not secrete properly, the moth patches are formed and the face takes on a muddy and sallow look, then the circulation should be stimulated. If the face is oily with the tendency to form blackheads, then you can use lotions of an astringent nature, such as cologne or alcohol and water, glycerine and water, or a few drops of tincture of benzoin. For pimples some astringent ointment is needed, such as bismuth and vaseline, two drams to the ounce, or zinc oxide ointment, or the stimulation of some of the many preparations of sulphur lotions and ointments.

One should use a few simple toilet preparations which experience has demonstrated work well. Care should be taken in the matter of ointments and cold creams, for if the face is at all hairy they

THE FOUNTAIN OF YOUTH

will surely stimulate the growth. Some skins do not tolerate glycerine. It should be combined with water, and in all recipes where water is required a pleasanter preparation results from the use of rose water. In every case distilled water is necessary. Almond oil, since it is a vegetable oil, is less likely to make the hair grow than the animal oils. It does not keep well, and care should be taken to see that it is perfectly fresh. A combination of almond oil, vaseline and lanoline beaten together, to which a few drops of violet or any other perfume may be added, makes a good cream for the face.

The subject of facial applications should not be left without a word in regard to the use of powder. I can well remember when it was thought to be most injurious to the skin. It was said to render the skin yellow and wrinkled and to "stop up the pores" — and this is just what powder will do for those skins that are fine and inclined to be dry. Such skins do not need powders, but when the skin is oily and the sebaceous follicles secrete too freely, there is nothing more beneficial than a good absorbing rice powder. This, too, is the case when, because of the heat, the face perspires too freely. The talcum powders have no absorbing power and should be used only when it is necessary to have a protective merely, or to prevent surfaces of the skin from being rubbed.



PLATE VI.—MASSAGING THE FACE. A. Massaging the forehead. B. Smoothing out wrinkles. C. Getting rid of crow's feet. D. Kneading the cheeks.



THE COMPLEXION

SELF MASSAGE

Indiscriminate massaging and steaming the face have somewhat gone out of fashion, but there are many instances where facial massage is of the greatest benefit. If the complexion is muddy, inclined to pimples, blackheads and other facial blemishes, and the cheeks are without a good healthy color, it is well to use a complexion brush or facial massage to bring the blood to the surface. The light massage recommended for use while washing the face does not have very much effect on the muscular structure underlying the skin, but is designed for the skin alone.

To massage the forehead, the fingers of the right hand should be placed upon the right temple, with sufficient firmness to hold the skin in place, while the first finger of the left hand goes slowly and thoroughly with a circular motion over the surface, pressing at the same time deep enough to move the muscles upon the bones underneath. The next movement is to smooth with considerable pressure the skin above the eyebrows, using the first and second fingers of both hands, and in the same manner pass around the sockets of the eyes, always using the rotary movements.

One of the most useful movements for giving tone to the cheeks is that of gently pinching them with thumb and forefinger, taking a deep pinch so as to

THE FOUNTAIN OF YOUTH

have the muscles and underlying structures receive the benefit. Then place the palms of the hand upon the face with the fingers upward and bring them gently down until the fingers reach the chin; after which, by means of the fingers pressed deeply into the flesh, push the whole mass of the cheek on each side firmly upward. This counteracts the sagging of the face which in time takes place with almost everybody. The chin is next massaged by means of the thumbs, the palms of the hands being placed upward with the fingers at the back of the neck. With a deep circular motion, the same as employed with the fingers in massaging the forehead, the thumbs gradually pass backward over the whole of the chin, while the first and second fingers of each hand with the same circular motion work among the muscles at the base of the skull and the upper bones of the spinal column.

SOME CHIN EXERCISES

Most beneficial in the matter of giving tone to the chin and in reducing the ugly rolls of fat which have a tendency to accumulate, and which the tight stocks and collars of the present day exaggerate are the following exercises. First throw the head back with sufficient force to put all the muscles on a stretch. Then in the same manner twist the head first to the right and then to the left. A fourth



PLATE VII.—MASSAGING THE FACE—CONTINUED. A. First movement to prevent sagging of the muscles of the face. B. Second movement. C. Thumbs for the chin. D. First and second fingers at the back of the neck.



THE COMPLEXION

useful movement consists in thrusting out the lower jaw as far as possible and bringing back firmly the corners of the mouth, putting all the muscles under the chin on a firm stretch.

CHAPTER IV

THE EYES

ONE cannot change the color or the conformation of the eyes, but the surrounding tissue, and the eyebrows and lashes, which make much more difference to the looks than is generally believed, can be modified by the individual greatly to the benefit of the eyes themselves and to their appearance. The eyes should be clear and bright and will be so if they are rightly used and kept free from inflammation. Few are the eyes that are not subjected to unnecessary and detrimental strain. Many women's eyes suffer from the strain put upon them by doing fancy-work. Fancy-work is useful, since it acts as a sedative for women's nerves after much the same manner as smoking acts for men. However, it is incumbent upon those who do it, to see to it that the eyes are not strained by doing that which is difficult to see.

EYE STRAIN AND ITS PRODUCTION

Many occupations carry with them the handicap of eye strain. In all work requiring the use of the eyes, whether with extra exertion or not, care



P LATE VIII.—THE USE OF THE EYE CUP. A. First position.
B. Second position.

THE EYES

should be taken to protect the eyes themselves from a glare, and so to arrange it that the bright light shall fall directly upon the work, without shadows, especially any which are movable. No one can comprehend the peculiar mechanism of the eye who has not studied it. It is the most wonderful and delicate optical instrument in the world with its lenses adjusted and focused by tiny muscles to all the varying conditions of light and distance. It will, therefore, be seen that to use the eyes in constantly fading light, such as when the twilight approaches, will subject the apparatus to great strain. In the same manner, reading while travelling is more or less of a strain. People often read in the cars while passing through a tunnel or by buildings, fences, or trains which sift every fluctuation of light across the page on which their eyes are fixed, the effect being the same as taking a lighted candle and alternately flashing the light and shutting it off. Almost as great a strain is made upon the eyes in looking at the objects which fly by as the fast train speeds on. It may not be as great a strain to read in the cars as it is to look out of the window provided one sees that a constant light is maintained upon the reading matter.

INFLAMMATORY CONDITIONS

The eyes and eyelids are covered with a delicate

THE FOUNTAIN OF YOUTH

membrane which takes the brunt of the trouble when the eyes are inflamed for any reason. The blood vessels of this membrane become enlarged, and the lining of the upper and lower lids is reddened as well as the eyes themselves. Very many people suffer constantly from a low-grade inflammation of the eyes which greatly detracts from their appearance as well as from their comfort. The puffiness which is seen under the eyes is the despair of many women. It may be occasioned by some chronic trouble, but it is often due to the relaxed condition of the skin occasioned by this low grade of inflammation, which may be the result of the eye-strain just referred to, or walking or driving in the wind, or due to exposure to the glare of sun or other light. It may also be occasioned by late hours. In days long gone by it was whispered as an accusation against some ladies who wished to make their eyes very bright that they dropped cologne into them. This really was a hygienic procedure, although if used pure it would smart intolerably.

To prevent and relieve the inflammatory condition it is necessary to use some mild astringent. The most generally useful eyewash, one which should be always in the family medicine closet, is made of ten grains of borax to an ounce of camphor water — not the spirits of camphor. It is easy to determine whether the puffiness seen under the eyes

THE EYES

is due to the inflammation of the lower lid. Just pull it down, and if it looks red and inflamed inside, it at once shows that this is the seat of the trouble. The best way to remedy the trouble as well as to allay any irritability of the eyes is by mild astringents used in an eye cup. By holding the head down while fitting the cup to the eye socket the contents are retained when the head is thrown back and the cup inverted. The eye, which was closed before, is then widely opened so as to be bathed with the fluid that the cup contains. The eye should be slowly opened and shut at least a dozen times. Salt and water made of the saltiness of tears gives a good eyewash for the cup. Boric acid of the strength of ten grains to the ounce of distilled water is another. When the inflammation is a little more severe add a grain of sulphate of zinc to the solution of boric acid. Another preparation is :

Borax,	-	-	-	-	-	-	-	1 gramme.
Quince seed mucilage,	-	-	-	-	-	-	-	10 grammes.
Water of cherry laurel,	-	-	-	-	-	-	-	5 grammes.
Distilled water,	-	-	-	-	-	-	-	100 grammes.

This should be diluted one-half or one-third when used in an eye cup. The eye cup should be only half full when prepared for use, and should be used night and morning. Even if the inflammation is slight, it strengthens the eyes to bathe them thus in salt and water or in the solution of boric acid.

THE FOUNTAIN OF YOUTH

PUFFINESS UNDER THE EYES

By means of the eye lotions given, especially the latter, the baggy conditions under the eyes can be greatly relieved. In conjunction with the means for allaying the inflammation of the lower lids which may be primarily responsible for the trouble, measures must be taken for restoring tone to the relaxed condition of the skin. Tannic acid will be found to be useful for this — twenty grains to an ounce of glycerine. This may be applied by means of a brush or a bit of cotton to the baggy skin night and morning. Another effective means of restoring tonicity to the skin is massage. This is very easily accomplished by one's self. With the thumb and forefinger of each hand take up tiny pinches of the skin and with considerable pressure, bit by bit, go over the whole tissue underneath the eyes. This is also good for the black circles under the eyes, the despair of brunettes, which are due oftentimes to lack of proper circulation of the blood, though when it occurs naturally as in people with dark complexions, it is caused by a certain thinness of the skin. For both the puffiness under the eyes, which is occasioned by disease of the kidneys or liver, over fatigue, etc., and the black circles one should look to the constitutional troubles and be sure that the functions of the body are properly performed.

Beside the massage for the relaxed tissues under



***P**LATE IX.—A. Massage for puffiness under the eyes. B. Massaging the eyeballs.*



THE EYES

the eyes, massage for the eyeballs is very beneficial. This should be gently done by means of the forefinger or the middle finger of each hand applied to the corresponding eyeball over the closed lids. Begin at the middle and gently, with a circular motion, pass the fingers outward until the whole eye has received the gentle rubbing. Little pressure should be exerted on the eye, as it tends to flatten it. In near-sightedness the eye is too spherical; in far-sightedness, the malady of those who have to put on glasses because of advancing years, the eyeball is flattened. In massaging the eye itself these conditions should be kept in mind.

THE CARE OF THE EYELASHES

The eyelashes and eyebrows are great additions to the beauty of the face. They are for the protection of the eyes, especially the lashes. When these are thin and straggling or do not grow properly, the eyes will become inflamed, if an unhealthy condition of the lids has not already occasioned the trouble; weak, strained eyes often cause thin and scanty lashes. Sometimes the eyelashes, by growing inward, act as a foreign body and keep up a constant irritation of the eye. This can easily be detected by pulling down the lower lid and looking at the lashes to see the state in which they are growing. They should be in a regular line, evenly distributed, turn-

THE FOUNTAIN OF YOUTH

ing outward and downward with a gentle curve on the lower lid and outward and upward on the upper lid. The longer and silkier and thicker they are the better. If the line is not straight and the direction of a lash here and there is faulty, try to straighten them by means of small tweezers. If the direction cannot be remedied and certain hairs sweep the eyeball every time the lids cover the eyes in winking, these should at once be pulled out. It is not difficult to do it for one's self.

Styes are due to the irritation of the hair follicle out of which an eyelash springs. They should be opened as soon as the pus is formed, for they will not get well as long as the pus remains. They will not occur unless the lids become inflamed. To promote the growth of the eyelashes apply vaseline to the roots. For the inflammation of the follicles and scaliness add to the vaseline fifteen grains of precipitated sulphur ; or fifteen grains of yellow oxide of mercury to the ounce of vaseline. In applying either of these ointments it is well to warm it a little, as it will not then be so sticky.

Trimming the eyelashes once in two or three months is said to be very beneficial in promoting their growth and thickening them. This is done with a pair of curved scissors. Any one can do it. Only the tips should be clipped, and this should be done very evenly.



PLATE X.—A. Training the eyebrows. B. Trimming eyelashes.



THE EYES

TRAINING THE EYEBROWS

The effect of the eyebrows on the appearance and character of the face is seldom appreciated except by the stage artist, who in representing a part addresses himself with all the skill he possesses to make the eyebrows do as much as possible in his make-up to express what he is supposed to set forth. He reduces them, thickens them, arches or straightens them, as the part demands. Too thick and bushy eyebrows are not becoming. In such cases they should be trained and shaped by the fingers. A very little oiling may be necessary to reduce them to submission. If the line is uneven and ugly, the hairs which grow out of line can be removed by epilating forceps and kept down after this manner. If they are thin and uneven they can be treated in the same way as the eyelashes, by clipping every few weeks, applying vaseline and massaging them. The eyebrows are very easily trained to an attractive manner of growth.

Some women blacken their eyebrows with pencils that are sold for that purpose. This gives an artificial appearance to the face and should not be done unless the eyebrows have thinned to such an extent as to be almost entirely lacking. The absence of eyebrows gives the face a peculiar appearance, making the individual conspicuous, and it is allowable to use artificial means

THE FOUNTAIN OF YOUTH

to produce the effect, it being a choice of two evils.

THE USE OF GLASSES

From the number of persons who wear glasses it would appear that defective eyesight is more common than in former years. This may be so, but the increase is due also to the fact that ocular defects are more often detected now than formerly, and also because physicians have discovered how great disturbance to the general system may arise from defective vision. Headaches, insomnia, indigestion and nervous troubles may result from the fact that the eyes undergo a strain in their daily and constant use. The forehead becomes wrinkled and the face drawn when one cannot see properly. The eye-glasses of to-day are wonderful because of their crystal clear lenses, and the light frames by which they are securely adjusted to the nose. The clips differ in form and the sizes of the glasses themselves vary. These should be carefully fitted to the face both for the comfort of wearing them and for the effect that they have on the looks. Large glasses and square frames detract much from the face. The eye-glasses are made to fit so steadily that there is not the same necessity for wearing spectacles which formerly existed. Spectacles, too, are made to-day without rims, and are held in place securely

THE EYES

by almost invisible gold wires which curve about the ears. Nevertheless, as a general thing, spectacles are far from becoming.

Great care should be taken in wearing glasses to adjust them properly to the nose. Some people wear them astride the nose an inch or more from the eyes. They are not only unbecoming when so worn, but they are a strain upon the eyes, as the lenses are not made for focusing at that distance. Many people who need glasses fight off the time of wearing them, or try to read without them as much as possible. This is a great mistake, for the eyes become strained and inflamed as a result.

Lorgnettes are useful when glasses are needed only occasionally, for very short periods. It is much better to use them than to strain the eyes trying to read without any kind of glasses. When a string or chain of some sort is attached to the glasses, it should be as thin and light as possible, otherwise it bothers the vision of the right eye, the side upon which it is worn.

GLASSES FOR PROTECTION

Often it is well to wear colored glasses to protect the eyes from too great glare of the sun or the light from the sea or the sand. These are made in every variety of form and color. Those of a light color are best for simply protecting the eyes; when

THE FOUNTAIN OF YOUTH

the eyes are inflamed they should be darker. Such dark glasses are much better than the old cardboard patches covered with green silk which were formerly in use.

The effect of the wind, the dust and the light upon the eyes when automobiling has led to the invention of a number of contrivances for the protection of the eyes. Serious inflammation will result to those who ride swiftly in these motor vehicles without some protection. The automobile glasses should, when adjusted, fit so closely to the forehead and to the cheek to prevent them from moving or allowing any dust to sift through.

CHAPTER V

THE EARS AND THE NOSE

THE ears are worthy of more consideration than they receive, when viewed from the point of good looks. Nothing is prettier than a dainty, pink, shell-like ear placed upon each side of the head at the proper position for symmetry. The ear is at the lowest point of the bony casket holding the brain, the size of which can be estimated by remembering that the skull is about a third of an inch thick, and that the brain is fitted as tightly as may be within it. It would not seem possible that one could increase the size of the brain and enlarge and alter the shape of the skull, but I believe that this can be done by exercising and improving the mind.

THE CARE OF CHILDREN'S EARS

Mothers and nurses are responsible in a great measure for the shaping of children's ears. It is very difficult to alter the appearance of the ears when one has become an adult. Large ears in themselves are not so ugly ; it is only when they are set upon the head at such an angle as to extend beyond the face, bringing them into prominence

THE FOUNTAIN OF YOUTH

and making the face have the look of a jug with two ungraceful handles. Mothers examining their children to find their points of beauty should always inspect the ears. If these are found to be large and prominent they should at once be provided with thin, little caps, which if tied under the chin will firmly and steadily, with an even and not too severe pressure, hold the ears close to the head. This should be kept up constantly until it is seen that the ears no longer need the training. If after persevering in this practice until the child is several years old it is found that no improvement has been gained, then the child should be taken to a surgeon, who can remove a small elliptical piece of skin, and possibly the cartilage, from behind the ear where it is attached to the head, closing the wound with a few stitches and bringing the ear close to the head in proper position. The scar of the stitches will not show in any event, since it is concealed by the ear, and in the young will soon fade away. For any such procedure a first-class surgeon should be employed. The operation is not a dangerous one.

Children's ears not naturally prominent may become so if the child is carelessly put to sleep on its side with the ear folded forward or crumpled up. This also may be done when tying on the child's bonnet or hood. Sometimes, too, the child's head covering is held in place by wide ribbon strings,



PLATE XI.—A. Device for binding the ears closely to the head. B. The new-fashioned ear trumpet.



THE EARS AND THE NOSE

which, passing back of the ears and tied beneath the chin, push the ears forward.

THE EARS OF THE GROWN

Women who have prominent ears can modify their appearance by the manner in which the hair is dressed. The hair may be brought down, partly covering them, and made to fill in the space at the back. A rubber bandage can be applied at night; it should be brought down over the ears and a piece adjusted at the back of the head, which will hold it in place. The ear cap is another device for binding the ears closely to the head. It is made of strong white tapes. It would, however, be very easy to make one of fancy colored ribbons or of black velvet, so that it could be worn during the day, when it might form a pleasing head-dress. The same operation as that just described for children is sometimes performed on adults with good effect. One hesitates to undergo even a simple operation just for the sake of looks, but much more thought and money are expended in other directions for the so-called improvement of personal appearance, and this operation is without danger if done by a surgeon who is skilled in his calling.

CLEANSING THE EARS

Few understand the proper care of the ears. The

THE FOUNTAIN OF YOUTH

majority of people handle them roughly ; they allow dirt to accumulate in the folds and in the crevices, and punch and dig the ear when it feels irritated. The greatest care is necessary to cleanse the folded-over portions of the ear. Sometimes these folds are very close, and the seams easily crack if they are not gently treated and made perfectly dry after washing.

In order to prevent foreign substances from entering the ear, or, if introduced, from reaching the ear drum, the ear secretes a yellow, sticky substance which is commonly called ear-wax. If the auditory canal is irritated this substance is thrown out in great quantities and accumulates. Many instruments are devised for every-day use in cleansing the ear passages, spoons, scoops and the like. The instruments that are sharp are very dangerous, for they may irritate and even pierce the ear drum, which at the distance of little more than an inch from the opening of the ear closes the ear passage. The little sponges which come affixed to an ivory handle for cleansing the ear are useless contrivances from the fact that it is difficult to keep them perfectly clean. The best thing to use in cleansing the ear passage is a little swab made by wrapping the end of a toothpick with cotton ; this may be gently introduced into the ear, in order to wipe out the canal. Many women avail themselves of woman's implement for all purposes of probing and punch-

THE EARS AND THE NOSE

ing, the hairpin. This is not bad when the bent end is used covered with a piece of soft cloth or a handkerchief. In any event handle the ears gently. If anything is introduced frequently into the ear an increased flow of wax will take place. Exposed to the air, it dries up and hardens and fills the canal, sometimes resting on the ear drum itself and making one more or less deaf. It is easy to remove this. A few drops of olive oil should be warmed and dropped into the ear at bedtime, and the next day if the ear is syringed with warm water into a pint of which a tablespoonful of glycerine has been poured, the wax can be washed out, greatly to the relief of the ear. The syringing should be done with little force. Afterwards a bit of cotton should be worn for a few hours.

THE TRIALS OF THE DEAF

Those who are deaf suffer more from their affliction than the blind. The blind are usually happy and wonderfully light-hearted considering their trouble. Deaf people are sensitive to a degree and will resort to all sorts of subterfuges rather than betray how little they hear of what is going on. They are frequently the victims of misunderstanding, in consequence. They are apt to grow morose and suspicious. Their faces become dull, and they lose their good looks. Deaf people, too, are usually

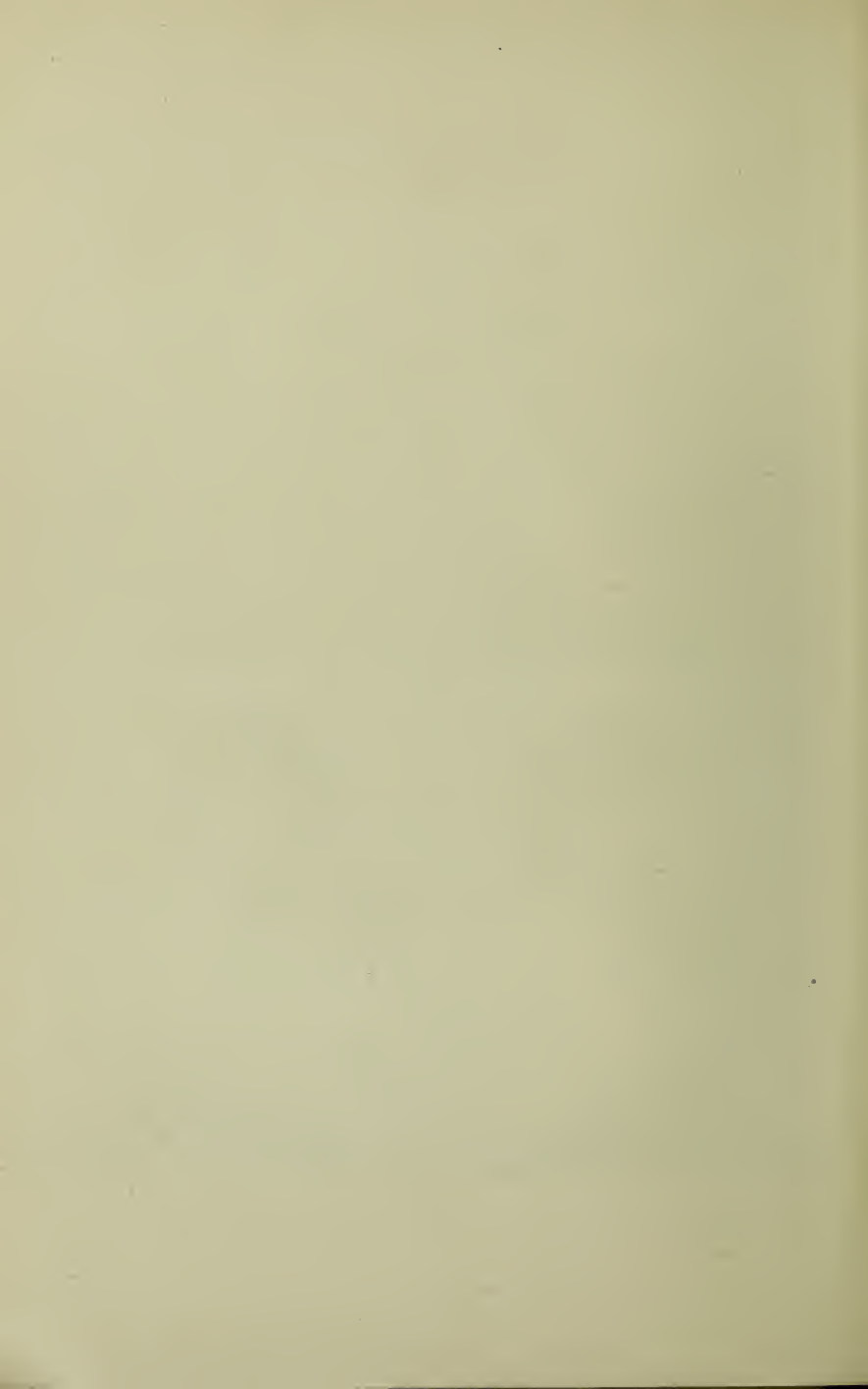
THE FOUNTAIN OF YOUTH

self-centred and do not at all realize what a tax their deafness is upon their friends. Often they resist the use of appliances which will assist their hearing and make it easier for others to converse with them.

It is not possible for a deaf person to gauge, properly, the extent of his or her deafness, and friends hesitate to afflict them by telling them how much their hearing is deficient. If you have a suspicion that your deafness has become a serious obstacle to conversation with your friends, have an examination made; have your hearing tested; try one of the many instruments which have been invented and see how much you can gain for yourself and friends in ease of interchange of ideas. Much has been said and great have been the expectations raised for the results to be obtained from electrical appliances as aids to hearing, but these have not yet been sufficiently perfected to prove of value. There are small devices that can be held concealed in the hand, or if that is too tiresome they may be placed upon a handle. For dress occasions a trumpet concealed in a fan can be used. The old-fashioned speaking trumpet, with a long, flexible tube, is much the best. It conducts the sound more easily, and conversation for both parties can be carried on with less effort. An invention for magnifying the sound has been placed at the ends of the flexible tubes,



*P*LATE XII.—Various devices for improving the hearing.



THE EARS AND THE NOSE

which is certainly an admirable contrivance for conducting sound. There is also an instrument for magnifying sound which, if placed upon the table near the ear of the deaf person, enables such a one to hear reading aloud, without exertion.

If one has an infirmity of any kind it is much less noticeable if one carries it off jauntily without an effort at concealment. To try to conceal such defects is like the ostrich trying to hide his head in the sand. For use in public places the fan-shaped contrivance placed between the teeth has been found useful, the teeth and bones of the face aiding in conducting sound. The otophone, which is used with the long, flexible tube for ordinary conversation, is made without the tube for use upon public occasions, such as at church, lectures and concerts.

The instrument that will help one person may not be as good for another. It is best to make a careful trial of each kind and select that one which will best transmit the sound. It takes a little time to become accustomed to the use of an ear trumpet, just as it does for the eyes to become accustomed to glasses, but it will relieve a great mental strain upon the deaf person and will in every way increase his happiness and that of those with whom he associates.

THE FOUNTAIN OF YOUTH

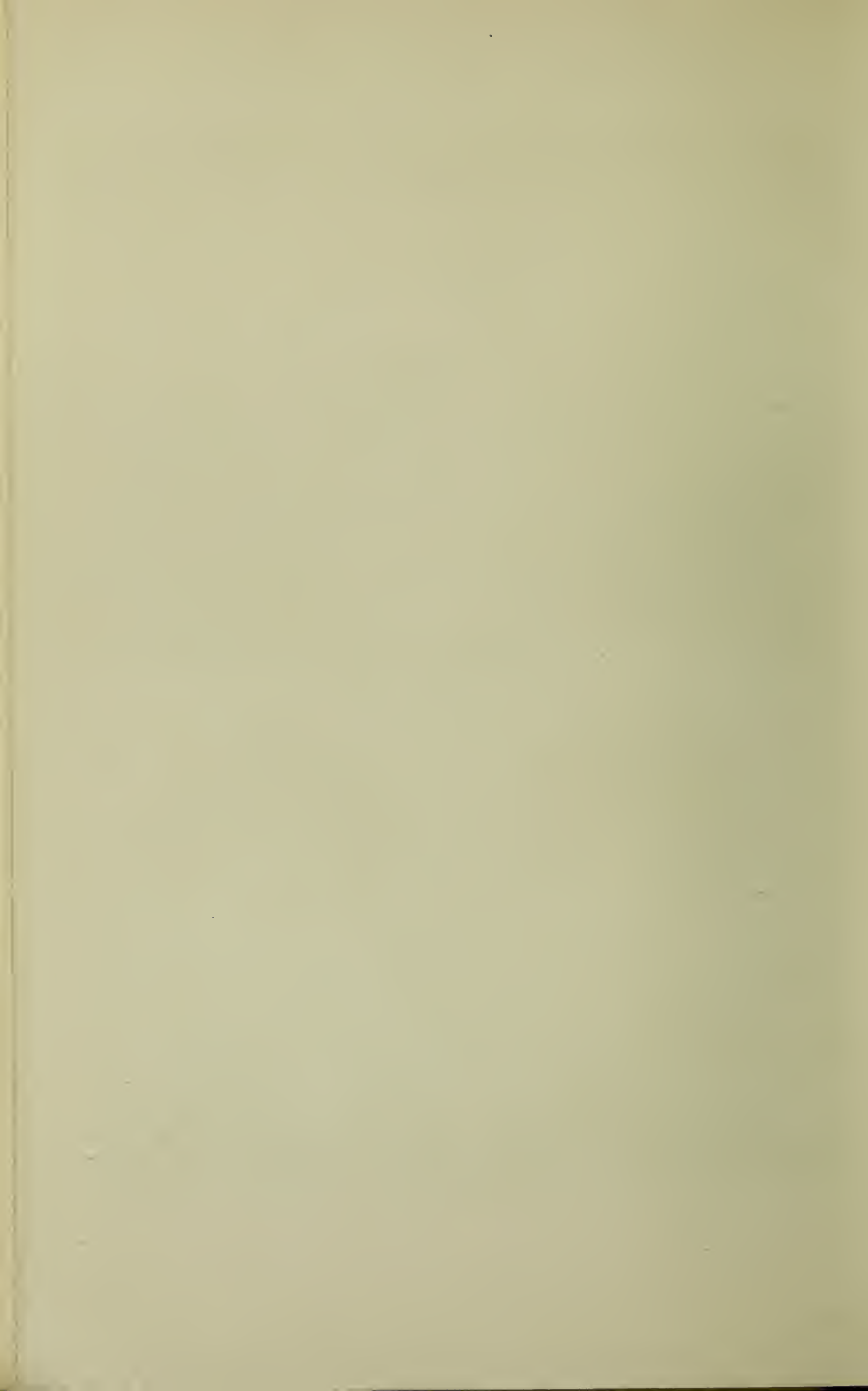
REGARDING THE NOSE

The nose is composed of two portions, the bony and the cartilaginous. The upper part is formed by two small bones placed together to make an angle, or what is popularly called the bridge of the nose. The shape depends very largely upon the angle formed by these nasal bones. If the angle is sharp it makes a thin nose; if it is a blunt angle the nose will be flat and spreading like that of the negro. It is not possible to do much towards shaping this part of the nose after early childhood. The nose suffers much after the same fashion as the ears, by careless handling in infancy and early childhood. It is said that the child at the breast by pressure against the mother, can have its nose irreparably misshapen. If mothers, as they daily wash the face of a child, will carefully and gently, with the fingers, mould the nose, they can model it into a proper shape. Children should be taught when using the handkerchief to be careful not to wring or twist the nose. I have seen a nose very much misshapen and drawn to one side by the constantly incorrect manner of using the handkerchief. Rough handling will also enlarge the nose and make it red.

Red noses are the despair of their possessors. It is difficult, too, to remove the trouble. The blood vessels of the nose become enlarged through exposure to the cold, by excesses in eating and drink-



*P*LATE XIII.—A. A nose clip. B. and C. Shaping and massaging the nose.



THE EARS AND THE NOSE

ing, and also when the functions of the body are disturbed, especially when indigestion and constipation are present. The skin of noses which become red is usually very delicate. The skin may be toughened by the use of cologne and water in equal parts. This also helps to remove the oily and greasy condition that is present. Tannic acid in glycerine (twenty grains of the tannic acid to one ounce of glycerine) applied night and morning will sometimes relieve the redness, when the blood vessels are not too much dilated and the redness is superficial. One of the best means of obviating the condition is the use of Faradic electricity. This has to be carefully and scientifically applied or it will make the condition worse rather than better; the current should be extremely gentle to narrow the blood vessels, for a strong current will overfill and dilate them. The use of electric batteries for cosmetic purposes should not be ignorantly undertaken, for the amount of current and the length of application cannot be determined by the inexperienced. It should not be forgotten, moreover, that a red nose may result from inflammation of the lining membrane, an examination of which should always be made.

SHAPING THE NOSE

Massage is good for stimulating the vessels to do

THE FOUNTAIN OF YOUTH

their duty. It is also good in shaping the nose. This is best done by the forefingers of each hand applied to each side of the nose. Begin at the bridge of the nose and work down towards the tip with a gentle rotary motion. When at the nostrils the pulps of the fingers should find their way carefully into the seams formed by the junction of the nose to the face, and the wings of the nose can be moulded and shaped by the fingers. This treatment, night and morning and every time that the face is washed equalizes the circulation, and keeps the sebaceous follicles, which are very numerous at the sides of the nose, in the state of proper activity.

It is said that much can be done to render a thick and spreading nose shapely by the use of a nose clip. Several kinds of these are to be found at the instrument makers'. The point is to have them fit easily without exerting too much pressure. Home-made devices can be formed by means of a bit of wire padded, or a clothes-pin may be used, although it is difficult to adjust a clothes-pin, especially those of the clip variety, so that the pressure will not be too severe.

These measures will have to be persisted in for a long time before successful results will be obtained. Women are needlessly sensitive about the shape of their noses and often would change it if they could.

THE EARS AND THE NOSE

Good advice is summed up in the words, "Let well enough alone."

Before leaving the subject there is a word to say about surgical procedures. Many times deformities occur as the result of falls and blows. These can be remedied by the surgeon. The surgeon is also able to straighten noses, to reduce the nose that is too large and otherwise beautify that most prominent feature. Medical journals are filled with reports of such cases, illustrated with pictures "before and after." It should be remembered in considering the surgical methods for improving the appearance of the nose that in case of failure the result will be most conspicuous.

The nose is most useful in its office, and if its means of introducing air into the lungs is interfered with, by inflammation, mucous growths or thickening of the bones, the health will suffer. A child who is what is called a "mouth breather," that is, one who breathes through his mouth because the air cannot pass freely through his nose in consequence of some obstruction, will not develop properly. He will be either mentally or physically deficient, because his blood is not of the right quality, having not received sufficient oxygen before it is sent on its course through the body. The brain suffers from insufficient nourishment, the organs of

THE FOUNTAIN OF YOUTH

digestion suffer; the heart and lungs suffer; the muscles suffer.

What is true of the child is true of the adult. Care should, therefore, be taken to prevent colds and catarrhal inflammations which will block up these passages. All growths and spurs of bone which narrow or close these passages should be removed as soon as possible. However, it is not well to have operations performed on the nose in cold weather, as the wounds will not then heal so readily.

CHAPTER VI

THE MOUTH AND TEETH

IN an old physiology there is a picture to show that the mouth is the feature that gives expression to the face. The picture is that of a smiling and benign countenance. A leaflet is pasted between the pages with a mouth upon it distorted by angry passions. This can be placed over the mouth of the picture, and at once, although the eyes and cheeks and nose remain the same, the whole is changed. The mouth is the feature that displays the will power of the individual. I have seen many young girls who were very good looking except for the mouth, over which they had no control. To obtain control over the mouth one should not depend upon the "prunes" and "prisms" of our grandmothers, but upon cultivation of the mind and upon habits of self-denial and unselfishness.

THE CONTROL OF THE MOUTH

In the first chapter it was shown how often the mouth is distorted by grimaces. Lips that are not ugly in themselves become so when thrust forward or allowed to hang open. Chewing the lips is an-

THE FOUNTAIN OF YOUTH

other bad habit, which not only distorts an otherwise beautiful mouth, but causes the lips to become dry and to crack. It is entirely unnecessary to have dry, cracked, and colorless lips. If from any cause, such as chewing the lips, or exposure to cold and dry atmosphere, the lips become parched and seamed, some kind of grease, such as vaseline or cold cream, should at once be used freely.

Anoint the lips several times during the day with the preparation that has been found to agree with them best. Sometimes glycerine and rose water, in equal parts, is found beneficial; or the old-fashioned camphor ice, made of refined lamb tallow, a couple of ounces, and a piece of gum camphor the size of a butter-nut, melted together; or vaseline and almond oil, equal parts beaten together; or an ointment made of vaseline, lanoline and almond oil in equal parts. If the weather is cold it is well to use one of these emollients before going out. Apply the ointment thickly and then wipe it off with a soft cloth or an old handkerchief. Wetting the lips will cause them to chap. Sometimes in cold weather the breath freezes on the veil and, coming in contact with the lips, causes them to chap and crack.

The lips should be naturally of a good color if the health of the individual is good. It is vain to resort to artificial means to color the lips. If the circulation is poor the lips will be purple. If the



PLATE XIV.—CORRECT WAY TO BRUSH THE TEETH. A. Selecting the brushes. B. Brushing the inside of the lower teeth. C. Brushing the inside of the upper teeth.

THE MOUTH AND TEETH

digestion is bad the lips will be white. If the whole system lacks tone and vigor the lips will be lacking in color. Therefore, instead of resorting to carmine pomades to improve the color of the lips, build up the constitution by all the means that make for health.

CARE OF THE LIPS

A very good way to keep the lips in a healthy condition is to toughen them by the use of spirits of camphor, wetting them with the camphor night and morning. If one should use camphor the minute a cold sore is discovered, first wetting the spot with the camphor and then adding the powdered subnitrate of bismuth, so that the cold sore will be covered with a paste, it may scatter it, and in any event it will lessen its size. Wetting them with peroxide of hydrogen will also check them. Cold sores eat into the skin and may leave scars that will remain permanent. These cold sores come as the result of colds, of indigestion and injury to the lips such as one suffers at the hands of the dentist when filling or cleaning the teeth. If a cold sore has formed it should not be picked or interfered with. It should heal under the scab, and by so doing it will leave very much less of a scar.

Any deformity of the lips, such as the harelip, which is often accompanied with the cleft palate,

THE FOUNTAIN OF YOUTH

should receive surgical attention early in life. Surgery in this direction has become so skillful that it is seldom now that one sees this deformity.

A BAD BREATH

There is no excuse for a bad breath. Nothing gives a person such a sense of grievance against another as to have one puff into the face a fetid breath. One should never give or take another's breath. Diseases of contagion are often thus propagated. Diseased condition of the nose, sore throat and bad tonsils, decayed teeth and diseases of the lungs and stomach are among the causes of bad breath. A severe catarrhal condition of the nose will give rise to such an overwhelming odor that it will poison the atmosphere of the whole room. Antiseptic sprays for the nose and mouth washes should be resorted to in order to purify the breath. Soda mint tablets or granules are good for the purpose, as are also the Japanese pastilles and the various kinds of cachous, charcoal tablets, cardamom seeds, orris root, flag root and other aromatics. Do not, however, depend on these to cover the bad odors of the breath, but find out the root of the trouble and see that that is remedied. If the stomach is out of order it should be seen to at once, not only because of the offensive breath which it produces, but because of the ill effects of indigestion and constipation on

THE MOUTH AND TEETH

every part of the body. All of the air passages should be investigated. Any disease of the lungs that causes bad breath must be very severe indeed.

Each person exhales a peculiar odor from the secretions of the glandular structure of the various tissues. This same odor is intensified and made more individual by reason of the various soaps and perfumes that one employs as toilet articles. It is because of this individual odor that dogs are able to track a person. One should see to it that the peculiar personal odor, the greater part of which is derived from the breath, is of an agreeable nature. Heavy perfumes are not only disagreeable to some people but are nauseating. They should never be used. I can recall instances of women who have used a heavy extract with musk in its composition which would fill a room in which they happened to be. It was so distasteful to many that not a few avoided meeting or inviting them on this account.

The nasal membrane is often affected at the same time as the throat, so that a person is unaware of his or her offensive breath. Anxiety, nervousness and going without food for some time will also render the breath malodorous. Ask some friend to tell you the truth if you have any misgivings on the point, although one ought to be able to determine the matter for one's self.

THE FOUNTAIN OF YOUTH

THE CARE OF THE TEETH

The Germans have a proverb the literal translation of which is "the mouth with beautiful teeth smiles gladly." A set of pearly-white, regular teeth lights up the face of one who might otherwise be considered plain. Modern dentistry has brought it within the power of almost every one to have presentable teeth. If teeth could be kept perfectly clean they would remain the same throughout a lifetime. The secret of the preservation of the teeth is absolute cleanliness. The irregularities of surface, the spaces between the teeth where food accumulates three or more times a day, the temperature of the mouth, which is just the right degree to favor fermentation and decay, are factors that make it so difficult to accomplish this. The first rule then is to cleanse the teeth thoroughly after eating, no matter how many times a day this may be.

A wash to use in brushing the teeth should be composed for the most part of soap in some form, since soap is both cleansing and alkaline. It is easy to make your own preparation and much less expensive. Take tincture of green soap, alcohol and water, equal parts of each, add enough pure glycerine to sweeten to taste, adding enough oil of wintergreen to flavor it and also a few drops of oil of roses. The popular taste demands that a tooth wash shall be red, the same as it requires a disin-



***P**LATE XV.—CORRECT WAY OF BRUSHING THE TEETH—CON-
TINUED. A. First movement. B. Using the other hand for op-
posite side. C. Turn the wrist to sweep brush downward.*



THE MOUTH AND TEETH

fectant to have a strong odor. The tooth washes sold by the druggists are usually colored with blood root, which is harmless. Dissolve a little of the powder in alcohol and add it to the tincture of soap and alcohol before putting in the water, as blood root will not dissolve in water. This can be made up in quantities to last months. If the tooth wash thus made does not seem soapy enough, lessen the amount of alcohol and water or add more tincture of soap. The alcohol of the mixture is disinfecting and a very good preservative.

HOW TO BRUSH THE TEETH

The next matter of importance is selecting the tooth brush. One should not be economical in the choice of tooth brushes. It is well to have the two kinds, one in which the bristles are even and the other in which the bristles have been cut across so as to leave the bristles in points that will make it easier to brush between the teeth. While in the act of brushing the teeth one is apt to think of the teeth as a "set" and not of each individual tooth. This is a mistake. Each tooth must be thought of as something to be cleaned in its entirety, front, back, sides and its junction with the gum. Therefore, in selecting a tooth brush, it should be remembered that the one with full complement of bristles, and these good and stiff will best remove

THE FOUNTAIN OF YOUTH

the débris and the tartar from the teeth. If the gums are soft and spongy, one may not be able to use so stiff a brush at first, but after a time one can educate one's self to do so. It is only the hard bristles that will keep the teeth perfectly clean. Brushes become worn out much sooner than is generally supposed. The points of the bristles become uneven and jagged and tear the gums. Once a month is none too often to have a new tooth brush. Another trouble with tooth brushes is that they are left wet with more or less tooth wash or powder in them, which decay and these mingle with the impurities from the mouth, so when they are used from time to time, they are the reverse of clean. It will not hurt the tooth brushes to dip them occasionally in boiling water. They should also be rinsed very thoroughly after using. When there is a lack of running water more vigilance is necessary in this direction.

It is not infrequently the case that the right teeth on the right side of the mouth suffer more from decay than those of the left. The reason is not far to seek. The tooth brush with its fresh supply of dentifrice grasped in the right hand is applied to the left side first. The right side, too, is brushed with the same hand, and the brush is not applied as carefully to the teeth or as thoroughly. The teeth should be brushed with the hand of the

THE MOUTH AND TEETH

opposite side; that is, the right hand for the teeth of the left side and the left hand for the teeth of the right side. The brush should be rotated up and down from root to crown by dexterously turning the wrist. After the outside of the teeth is brushed the inner surface should be treated after the same manner, first the upper and then the lower. The serrated tooth brush is especially useful for the back teeth, especially the ones furthest back which are not apt to get their share of brushing. When you have cleansed the teeth after the manner described, and have thought that you have surely cleansed each tooth perfectly, you will find that the sides of the teeth are far from clean, even if you have industriously used a toothpick; but if, according to the size of the space between the teeth you draw up and down a piece of dental floss, or tape, you will be surprised to see how much you can remove, and you will readily learn also the reason why the dentist finds so many cavities in these out of the way places. Use dental floss of the size that will pass readily between the teeth, or tape or baby ribbon if the space is large enough and clean thus the sides of the teeth, first the one to the front and then the one to the back. It is only in this manner that the teeth can be perfectly cleansed and the tartar kept from collecting.

If the teeth after this care become yellow or

THE FOUNTAIN OF YOUTH

show discolored spots, a little powdered pumice stone can be used. It should be slightly moistened so that it will adhere to the orange-wood stick with which it is applied and rubbed on the spots. After brushing the teeth an antiseptic mouth wash should be used. This should always stand in a covered glass on the toilet table ready so that the mouth can be frequently rinsed. It sweetens the breath and is grateful and refreshing. There are dozens of these preparations for sale, but cologne, made as it is of aromatic oils and alcohol, is as good as any of them. A tablespoonful or more may be added to a glass of water. It should be kept covered, not only to keep out impurities but to prevent evaporation.

A PERFECT SET OF TEETH

The possession of a perfect set of teeth is within the reach of almost every one whose parents have had the knowledge and the means to care for their children as they should. The regularity and irregularity of teeth is due to the way in which they come in. If the upper and lower back teeth fit together as they should, space is left for the others, but if they do not articulate properly it will thrust out of position all those that grow between. A well known dentist says, "At about seven years of age or even earlier, we may foretell whether any irregularities are impending, and may, as soon as

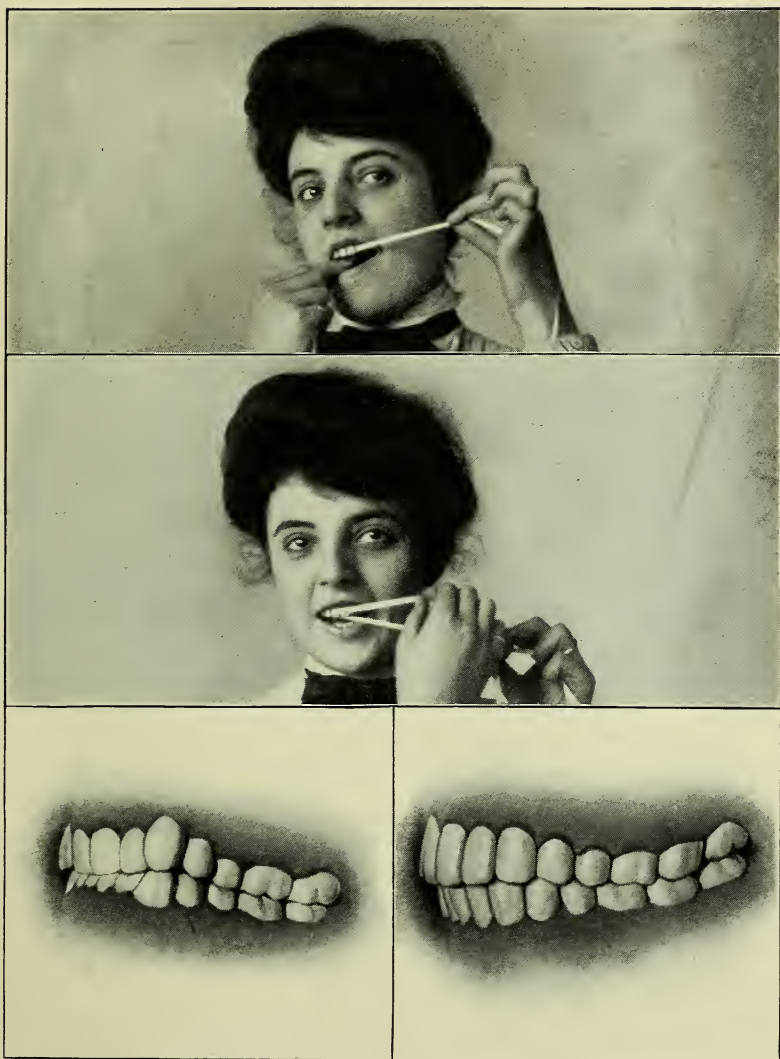


PLATE XVI.—A. and B. Cleansing the sides of the teeth with a narrow ribbon. C. Faulty articulation. D. A perfect set of teeth showing correct articulation.

THE MOUTH AND TEETH

the first molar teeth are developed, by one means or another correct such irregularities surely and painlessly. The old-fashioned way was to extract teeth to make the others 'come right,' where there was any appearance of crowding. This according to modern ideas is all wrong. Tusks, which are popularly supposed to be supernumerary teeth, are not in reality such; they are teeth whose position in the mouth has been usurped by the crowding forward of those at the back, and given the space required by enlarging the arch of the jaw, they will come down into their proper place."

Every year marks an advance in the care and preservation of the teeth. Beautiful teeth are a great acquisition in the matter of looks, but that is nothing in comparison to the aid that they are to the preservation of the health. Fine physique, a good complexion, the power of work, even life itself, is dependent upon the action of the teeth in reducing food to a proper condition for stomach digestion.

CHAPTER VII

THE CARE OF THE VOICE

THE theories which have been advanced to account for the nasal, unmusical voice of the majority of Americans are numerous but unsatisfactory. Why the voice of American women should be shrill, high-pitched, lacking in modulation, and resounding with the so-called Yankee twang has seemed inexplicable. It has been attributed to the unhappy effect of the climate upon the vocal organs; it has been placed as a burden of reprobation on the Puritan ancestors, who had a fashion of speaking and exhorting in a whining, sing-song voice, made sonorously nasal by what is popularly expressed as speaking through the nose. Many other causes have been given, not worth while to dwell upon, for the reason need not be sought in fine-spun theories of atmospheric changes or inheritance, but may be brought home to the individual herself. She alone is to blame. It is all the result of thoughtlessness.

It was Garcia, the great Parisian teacher of singing, who, in 1854, arranged mirrors so that he could see his larynx and the working of the vocal cords.

THE CARE OF THE VOICE

A year or two later, Czermak invented and popularized the laryngoscope. To look at the picture reflected in the little mirror that reveals the voice instrument is to see a marvellous mechanism for the production of sound. It is situated at that part of the throat which shows the prominence called the "Adam's apple"; in fact, the enlargement is to make room for the stretching of the vocal cords. These cords are bands of stout, elastic tissue, beautifully white in color, contrasting with the red of the tiny muscles which act to open or shut them, or to render them tense. The sound is produced by the vibration of these cords as the air strikes against them when expired from the lungs. The vocal bands are drawn aside for the entrance of the air to the lungs in inspiration, but they are ordinarily left passive at the exit of the air. When sound is produced they are acted upon by the will to produce the pitch desired, just as in a stringed instrument the strings are made taut, or loose, when a higher or lower note is required. The back of the throat and the structure of the bones of the nose and of the face make the sounding-board which regulates the resonance.

To preserve the voice the muscles which operate the vocal cords should have free and untrammelled play. They are an ingeniously contrived set of pulleys attached to cartilages, and some have long

THE FOUNTAIN OF YOUTH

names difficult to remember, although they are almost the tiniest muscles and cartilages in the body. They keep their integrity wonderfully, and stand bravely to their post through to the end. Nevertheless, with the exception of possibly one person in a hundred thousand, they do their work while undergoing the grossest outrage. This consists in the interference of other muscular structures in their work. While you read, experiment, and you will see what I mean. If you will speak a sentence, and at the same time place your fingers so that they lightly clasp the muscles of your throat, you will see that they are stiffened. Next feel the chin, to discover that the muscles of the floor of the mouth, formed by muscles from the larynx and the tongue, have hardened ; touch the cheeks, and observe that you have brought the muscles of which they are composed into operation ; if you are very hard on your vocal cords, you have enlisted every muscle below the forehead. Every particle of this expenditure of muscle force is not only unnecessary, a complete waste of nervous energy, but a dead weight on the tiny muscles and cartilages of the vocal apparatus against which they must work. If the mechanism of the voice muscles were not endowed with tremendous resisting power and unheard-of strength, they would give out long before they do. This wrong use of the vocal cords in

THE CARE OF THE VOICE

speaking produces congestion, and many sore throats result from the sympathy of the adjacent tissues. Strangely enough, singers, even those of prominence, who are among the few who understand vocal mechanism, appreciate these conditions thoroughly for singing, and yet wholly neglect them when using the speaking voice. It is this, together with wrong methods of vocal culture, that produces the "colds" from which they often suffer.

The culture and training of the voice is one of the best means of promoting the general health. This is due mainly to the formation of correct habits of breathing. One cannot sing or speak well without understanding the action of the lungs. These have been likened, in their importance and use to the vocal cords, to the bellows of the organ. The lungs are never emptied of air in breathing. In ordinary breathing very little of the air which fills them is displaced. In forced expiration, such as accompanies singing, the old, "residual air," as it is called, is forced out, and replaced by fresh air. This in turn stimulates the circulation, and thus the whole processes of the body are helped and vitalized.

The greatest injury is done to the delicate mechanism of the larynx by frequent colds. The vocal cords are thickened and inflamed, and sometimes injured beyond repair by these repeated inflamma-

THE FOUNTAIN OF YOUTH

tions, many of which occur in childhood. One should not be overwhimsical about draughts, but it is true that they are injurious to the vocal cords. The latter are also very susceptible to the evil influences of irritating conditions. Air laden with impurities, such as smoke or dust, passing through the narrow passage formed by the vocal cords leaves its deleterious impress upon them.

A whole chapter might be written on the seduction of a delightful voice. Better than lovely raiment, better than a dazzling complexion, better than an array of accomplishments, is a lovely, melodious voice in conversation. That connoisseur of all that is most alluring to the human being, his Satanic Majesty, fully realized this, according to the poet, who sings :

“ The Devil has not in all his quiver’s choice
An arrow so fatal to the human heart as a sweet voice.”

CHAPTER VIII

THE NECK AND ARMS

THE care of the skin of the neck and arms is the care of the skin of the body, and before discussing the subject of this chapter it will be well to speak of the influence of baths and bathing on the skin. The skin represents the state of the health of the body and is the best index that we have as to age. If the skin is white and smooth and the circulation good, it shows that the blood still courses through the minute blood vessels that nourish the skin, for these are the first to wither as the body changes from growth and maturity to degeneration. In order to prevent this, the greatest care must be taken to keep the skin in its proper condition, which is done by baths and massage.

THE QUESTION OF BATHS

The question of baths is a question of individual peculiarity. Baths may be for cleansing, for tonic or for medicinal purposes. Cold baths are not cleansing to any but a very slight degree. They are very refreshing taken in the morning, whether by means of the cold sponge or the cold plunge, but

THE FOUNTAIN OF YOUTH

they do not agree with everybody. Instead of being tonic they may prove depressing. This may not at first appear, but if the lips are blue and chills follow they should not be indulged in. The reaction may be good at the time and the depressing effects may not show themselves until some time afterwards.

The outer layer of the skin is continually changing and being cast off. The baths for cleansing should be not only for the removal of accumulations from the outside, but for getting rid of these external layers of skin which prevent the sweat glands and other cells beneath from acting. The Turkish bath is most useful for this purpose. The heat loosens the external layers of the epidermis so that it comes off readily. One can make a very good substitute for these baths at home. Inexpensive cabinets are to be had that will take the place of the hot room. A person has to be very careful, in using them, not to upset the lamp. One can obtain much the same result, by using the ordinary bath-tub, filling it with water as hot as can be comfortably borne, immersing one's self in it up to the neck and soaking thus for twenty minutes or half an hour. If it gives a full sensation to the head, it is well to place around the forehead a towel which has been dipped in cold water.

If the skin is rough or easily irritated, it is well to use bran, a couple of quarts to a bath-tub full of



***P**PLATE XVII.—A. A relaxed and fatty chin. B. One way to remedy it.*

THE NECK AND ARMS

water, tied or sewed up in a bag of cheese cloth or other thin material. The bath is often softened by the means of bicarbonate of soda, half a pound to the bath, or by extract of pine or by tincture of benzoin. It is much better to make the bran bags one's self than to buy those which are sold perfumed and filled with soap at the druggist's. The bran can be obtained at the feed store or the grocer's. After the soaking process, one should go carefully over the skin of the entire body with the fingers, pushing and rubbing the skin so as to remove the layer of dead skin. This will come off in little rolls under the fingers. Then with a firm Turkish bath brush and plenty of soap, the kind that has been found to agree best with the skin, one should scrub vigorously and effectively, so that the body is a fine rosy red all over; then return to the tub to rinse the body thoroughly, and let the faucets run until the water has gradually become cold.

After that rub down vigorously with a Turkish or rough towel and see that the body is perfectly dried. It is very beneficial and a great luxury as well if you can have a professional give the massage. If the skin is naturally dry and inclined to be rough, rub into it at this time vaseline and almond oil in equal parts.

THE REDUNDANT CHIN

The greatest trial to a woman whose years are

THE FOUNTAIN OF YOUTH

beginning to tell, is the chin. It is at the junction of the chin with the neck that the withering process begins. The tissues of the chin are often relaxed, and the flesh accumulates in a bag. The young, in their well-nigh perpetual motion, use every muscle in the body, but the average woman seldom is called upon in her occupations and pleasures to throw up the head and put the muscles of the chin on a stretch, and, as a result, these tissues become relaxed and flabby and the fat accumulates in ugly rolls. As a substitute for these natural movements a series of exercises can be used which are easy and effective in banishing the heavy chin. The first of these is to throw the head back as far as possible, thrusting out the under jaw at the same time, so that the whole chin will feel stretched and drawn out flat. With the chin still kept on the stretch turn the head first to the right and then to the left. These exercises, if persisted in, will surely give firmness and symmetry to the chin. After first using them the muscles of the chin will feel very sore, but that shows the effectiveness of the movements and that the muscles are getting the needed exercise.

The chin may also be massaged, after the manner described in a previous chapter by gently pinching the tissues and lifting them up by the hands, the fingers of both hands meeting in the middle of the chin, and then pressing and smoothing the flesh

THE NECK AND ARMS

backward as they separate one from the other. This treatment should be persevered in.

The chin can be reduced by using strips of rubber adhesive plaster such as is ordinarily used for surgical purposes to raise the mass of flesh and hold it in position. Or the chin may be bandaged, either by means of a ribbon or the ordinary rubber bandage. These should be applied firmly, and it is better to retain them in place by means of a strip passing around the back of the hair and meeting the bandage where it passes over the ear. This strip can be retained in place by means of safety pins. These contrivances may be worn at night, but they are uncomfortable, and it is much better to reduce the chin by means of massage and exercise.

The retreating chin often spoils the symmetry of the face. This may be due to the way the jaws close on account of the position of the teeth, and a dentist may be able to remedy the defect. Again, the person herself can do much by the way she forms the habit of closing her mouth.

REMOVING SUPERFLUOUS HAIRS

The chin is often rendered unsightly by a fringe of superfluous hairs. These also appear on the cheeks and lips. If there are not many of these hairs, it is just as well to remove them by pulling them out with tweezers or epilating forceps. Some

THE FOUNTAIN OF YOUTH

have the idea that this will increase the number of hairs, but this is not so; it may make the hair coarser, but that is not to be deplored. Many powders are on the market for the removal of hairs. They are very harsh in their action and should be used with care. They act by burning off the hair. They do not destroy the hair follicles at once, but as they are used from time to time the hair becomes less thick and coarse, and after a time success crowns the endeavor. If there are very many small, fine hairs, a light fuzz, on lips or cheeks or chin, this is much the best way of removing them, for when electrolysis is used for the removal of hairs, although it is the most effective way, it will stimulate the growth of the fine hairs which remain. A small needle is introduced into the hair follicle, and then the current is connected by the patient's placing the hand on the sponge held in the other hand. The electric current destroys the root of the hair and it can grow no more. Each hair removed cannot reappear if the hair follicle is destroyed, but the hairs that grow about the destroyed follicle are increased and thickened, so that the continued use of the electricity is necessitated until every hair is destroyed. Also great care has to be used in removing hair by electricity, not to have the current too strong, for if such is the case there is danger that scars will be produced, the appearance of which

THE NECK AND ARMS

is worse than the hairs themselves. It should be remembered, too, that the removal of hairs by electricity is painful, especially when those about the lips are attempted, and that the hairs are removed one by one. Unless one is sure that the person who is to do the work is perfectly acquainted with the method, it would be much better not to try it; and also unless one intends to stick to it until the work is accomplished, it would better not be undertaken.

The following are some prescriptions for pastes for the removal of superfluous hairs. They are recommended by excellent authorities. When trying them, they should first be tested on a small scale on the leg or arm. Skins differ very greatly with different individuals in regard to sensitiveness. The skin of the face is the most delicate and sensitive, especially about the lips where the hair is most likely to grow.

R.—Sodii hydr. sulph	℥	iv.
Solv. in aq. calc	℥	x.
Calc. hydr. pulv	℥	iiiiss.
Misce.		

When ready to use, make into a paste with starch and apply to the part.

R.—Sulphuret of barium	℥	iss.
Oxide of zinc	℥	vi.
Carmines	gr.	i.
Misce.		

Some of this powder is to be mixed with enough

THE FOUNTAIN OF YOUTH

water to make a paste, applied to the part and washed off in three minutes.

In Eastern harems, where it is the fashion to destroy the hair under the arms, they use a composition called "Rhusma." It is made after the following receipt :

R.—Arsenici tersulphuret	3	ss.
Calcis	3	ss.
Farinae tritici	3	iiss.
Aq. ferv. qs. ut. ft. pasta.		

This is applied with a wooden spatula to the thickness of a knife blade, and left on from five to ten minutes, or until it begins to sting, when it is scraped off with a blunt-edged knife, and the skin washed with warm water and dusted with rice powder. This rhusma paste is used on the face, but it must be applied with care, and only left on from two to five minutes. As soon as the slight itching which the application causes gives place to an intense burning, the remedy is to be stopped. After the application the paste and the hair are scraped off together with a dull knife or a paper knife, and after washing with warm water inunction of almond oil, cold cream or zinc ointment may be used, the skin having first been thoroughly dried with cotton wool.

As has already been said all depilatories are



***P**LATE XVIII.—Exercises most beneficial for improving the chin and for making the neck shapely.*

THE NECK AND ARMS

only palliative in their action, and when the hair grows again will have to be repeated, until after a time the destruction of the hair follicle will be accomplished.

CONCERNING THE NECK

A well-proportioned neck is a great beauty. "Columnar" is the expression used by artists ; that is, it should not be too short, but should be well proportioned to support the head. It should not be too fat or too thin. The skin of the throat, neck and chest shows more quickly than any other part of the body the lack of care. The pores of the neck become coarse, pimples appear and the neck is reddened. This is due oftentimes to lack of careful bathing. The tight, high collars are very bad for the skin of the neck. If the neck is short, the exercise for reducing the flesh of the chin will also tend to lengthen the neck a very little. If it does not actually do that, it is good for the muscles and the distribution of the fat. If the neck is too fat, massage will reduce the flesh. It will remove the little mass of fat that many women accumulate as the years go on, which is located at the nape of the neck. It is not difficult to massage the neck for one's self. Place the fingers of one hand opposite to those of the other, so that spread out they

THE FOUNTAIN OF YOUTH

meet in the middle, and then, with a movement in which the finger-tips describe small circles, go carefully over the entire surface front and back.

Upon the ribs is a thick layer of muscles which are attached along the length of the breast bone on each side. If these muscles are thin and flabby, the neck will be described accurately by the word scrawny. Of course, this flabby condition of the muscles is concealed when the layer of fat, always found to some extent under the skin, is sufficiently thick. Exercises such as extending wide the arms, or bringing the elbows backward trying to meet them in the middle of the back, and the use of dumb-bells will develop these underlying muscles and greatly improve the neck. Increase the circulation by massage, which helps the condition of the thin neck as well as that which has too great a deposit of fat. At the same time cold cream, vaseline or the combination of vaseline and almond oil should be rubbed in freely. The neck is different from the face in that there are seldom hair follicles which may be stimulated into growth, as is the case with the face. Generally if the neck is thin the whole person is thin. In that case measures should be taken to improve the general health.

The muscular condition of the neck can be improved by placing weights, such as a book, on the top of the head and supporting them for a while.



*P*LATE XIX.—A. *Massaging the neck.* B. *Using flesh brush to reduce size of arm.*

THE NECK AND ARMS

CHEST EXPANSION

Another method of improving the appearance of the neck and chest is in improving the expansion of the chest by increasing the capacity of the lungs. This may be done by breathing exercises. The breath should be slowly drawn in until the chest will expand no more, and then as slowly exhaled. Half a dozen such breaths taken morning and night will expand the chest more quickly than one would think. The use of a tape measure once a week, passed underneath the arms, its adjustment being carefully marked in order that the same place will be measured each time, will show precisely how much you have gained. The improvement which thus comes from forcible expansion is very great, for it improves the general health. At first the deep breathing will make one feel dizzy, but after a while the depth and number of the exercises may be greatly increased. When taking a walk where the air is pure and lovely, stop and take long breaths, or do so before an open window.

The cultivation of the voice is another method of developing both the chest and the lungs. The potency of voice culture may be observed in those who make singing a profession. They have beautiful necks and throats, without unsightly hollows. It is because they have to supply an ample quantity of fresh air in order to vocalize, and as a result the

THE FOUNTAIN OF YOUTH

whole system feels the benefit. Even if one cannot sing much, it is most beneficial to take singing lessons. Elocution lessons, too, are valuable. No greater charm can be possessed by young or old than a voice beautifully modulated; that is, of the right pitch, the right fullness and the right quality. It is a charm easily within the power of every one.

ABOUT ARMS

Perfectly moulded arms are rarely seen. Arms are apt to be either too thin or too fat, especially between the elbow and the shoulder. The muscles are flabby underneath, and the flesh of the arms hangs loosely. The skin should be smooth and white. Bathing after the manner just described will help to obtain this. Lemon juice is also useful to whiten the throat, neck and arms. If the arms are thin they can be very much improved by massage and exercise, and the same is true of arms that are too fat. Massage of the arms is accomplished by grasping one arm with the hand of the opposite side and, beginning either at the shoulder or the wrist, working up and down the arm with a wringing, twisting motion. To improve the circulation and to give symmetry to the arm, the muscle mass should be seized between the fingers and the thumb in a firm grasp and moved up and down upon the un-



***P**LATE XX.—ARM MASSAGE. A. Grasping the arm, use a twisting, wringing motion. B. Moving the flesh up and down on the arm.*

THE NECK AND ARMS

derlying bones as if the flesh were a sleeve hung upon them.

It often happens that the skin of the upper arm is very rough, especially at the back of the arm between the shoulder and the elbow. Frequently this roughness is occasioned by failure to remove the outer layer of epithelial cells, described when telling of the bath, and it is also due to the fact that one is careless about drying the skin of the arms thoroughly after bathing. The roughness may be removed with a little attention. Use pumice stone to rub off the roughened points. Lemon juice will also relieve the trouble. The use of grease is helpful. When the arms are hairy, grease should be used with care. Hair upon the arms is not so serious as upon the face. From the fact that the skin is not so sensitive as that of the face, it is easier and safer to use depilatories. Scrubbing the arms with soap and a complexion or bath-brush is said to lessen the coarseness of the hairs and will in time, if they are not too numerous, cause them to disappear.

The neck and arms are often discolored and rendered unsightly in evening dress because of exposure in out-of-door sports. Long sleeves to a bathing suit are apt to be clumsy. One will find a good protection for the hands and arms in the long silk mits that meet the sleeve. It coarsens the texture of the

THE FOUNTAIN OF YOUTH

skin to expose it too much to the weather. While out-of-door life improves the general health, it also improves the skin, but one should avoid freckling, burning and tanning the skin too frequently. The exposed skin can be made much less sensitive to the action of the sun's rays by first treating it to a good coating of cold cream, thoroughly rubbed in, and then applying powder. Avoid washing for some hours after exposure to sunshine or if necessary use water as hot as can be endured.

CHAPTER IX

THE HAIR

THE hair exhibits as much individuality as the person. Its variations in color, range from the perfectly white hair of the albino, due to entire lack of coloring matter, through all the tints of blond and of brown, to the deepest black. The hair varies not only in color but in texture. Some hair is naturally dry, brittle and uneven. Other hair is oily or wiry. The quality and condition of the hair, as well as the color, vary greatly with the different periods of life. These conditions should be thoroughly understood in order to care for the hair intelligently.

NECESSITY OF THE SHAMPOO

The necessity of cleansing the hair is imperative from every point of view ; as much for health as for cleanliness, since the hair and scalp cannot be healthy, any more than the skin, unless they are thoroughly cleansed of impurities. The oily glands of the scalp become choked and they are irritated to over-secretion, making the hair oily, or dandruff is caused. The hair follicles also become unhealthy,

THE FOUNTAIN OF YOUTH

so that the hair grows poorly or falls out. It should be remembered that it is natural for some hairs to fall out daily. It is said that the life of a hair is from two to six years, and that an average of fifty to sixty hairs fall each day. These are replaced, or should be, by a constant growth of new hair. The hair is said to grow at the rate of about eight inches a year.

Washing the hair is imperative, as a matter of personal cleanliness. The frequency of a shampoo depends upon two conditions, the necessity arising from the surroundings and individual peculiarities. Some persons' hair becomes more oily in a given time than others, from the nature of their glands; others perspire more freely naturally, or are made to do so because of their occupations. The regulation of a shampoo once a month recommended by the hair-dressers will do for many; but for others, as often as once a week, or once in ten days, may be required. As soon as the hair feels sticky, mats together easily or comes out, it is evident that the hair needs shampooing.

HOW TO SHAMPOO THE HAIR

After years of experience with all kinds of shampoos at home and abroad, the methods about to be described have been found to be the best. Of course, it is much easier and pleasanter to have some one



***P** LATE XXI.—SHAMPOOING THE HAIR. A. The shampoo brush.
B. Washing the hair.*

THE HAIR

who is skillful do the shampooing for one, but it often happens that those who make it a business are not to be had, and with a little experience and care, one can do it very well for one's self and much better than some who make a profession of it. Another matter should ever be borne in mind in going to a hair-dresser's for dressing the hair or shampooing it; that it is necessary to have one's own combs and brushes. In some States laws have been enacted to make barbers sterilize their implements, scissors, razors, combs and brushes, after each time that they have been used. It may be that those who have the care of women's hair do not so well understand the necessity for this cleanliness. One should keep brushes and combs with almost equal care in their own homes. Impurities accumulate very quickly in these articles of the toilet. I know of a case where the hair of a young girl was greatly benefited by using a fresh comb every day. She had half a dozen or more, to avoid cleansing one daily.

The mixture with which to shampoo the head varies greatly in different hair-dressing establishments. A very good one consists of a teaspoonful of cologne, a teaspoonful or more of tincture of green soap, the white of an egg stirred into a cupful of water. Some use the yolk, others the whole egg. If the hair is too oily, a little pure aromatic

THE FOUNTAIN OF YOUTH

ammonia can be added, or a little borax—too much borax or ammonia will make the hair too dry and brittle. The next step after the hair has been taken down and straightened and freed from snarls by means of combing is to apply the shampoo mixture with a brush. These brushes are inexpensive and are made for the purpose. An old tooth brush can also be used, but it is rather small and not as effective as the one especially designed.

The hair should be parted on the top of the head, and the shampoo applied by means of the brush, first to this parting; then dividing the hair, strand after strand, at intervals of half an inch, scrub the scalp up and down from the top of the head, holding the handle of the brush upward, which prevents the shampoo mixture from running down the hand and wrist. Scrub as hard as can easily be borne. When the entire scalp has been gone over, always in the direction from the centre of the head to the circumference bounded by the neck and ears, then the hair should all be gathered in the left hand and brought up to the top of the head so that the brush and shampoo can be applied easily around the roots of the hair about the forehead, above the ears and at the neck. The brush thus used removes dandruff, cleanses the scalp thoroughly, and, by bringing the blood to the minute vessels that nourish the scalp, greatly benefits the hair follicles.



***P**LATE XXII.—SHAMPOOING THE HAIR—CONTINUED. A. Rins-
ing the hair. B. Wringing the hair preparatory to drying it.*

THE HAIR

The next step is washing the hair itself. The remainder of the shampoo water is put in the basin and enough water added to wash the hair comfortably. The hair is thoroughly wet, and the head is scrubbed by means of the balls of the fingers. There should be a good lather of soapsuds. When this is well done, the ends of the hair should be washed out as if they were a piece of cloth.

Then comes the process of rinsing hair and scalp. This is the most difficult and most wearying part for one to do alone thoroughly. It is easier if an attachment with a spray can be made, but if that is not possible, the water must be dipped up and dashed on the hair by means of a mug. In this and the preceding process care must be taken not to get the soap in the eyes. The shampooing will prove a failure if any of the soap remains in the hair. Rinse and rinse until not a particle remains, or it will be found after the hair has dried that it is gummy and sticky. The last water in which the hair is rinsed should be perfectly clear and clean to show that the soap is all out. This water should be as cold as can be borne.

THE DRYING PROCESS

The drying process is a tedious one. It will not do to leave the hair wet to dry of itself, for it is at this point one is likely to catch cold. Care should

THE FOUNTAIN OF YOUTH

be taken, when indulging in washing the hair, to choose a suitable day. If the day is wet, foggy or stormy, it takes the hair nearly double the time to dry. When the hair has been thoroughly rinsed, wring it as dry as possible; after that shake it out and fan it vigorously with the old-fashioned palm-leaf fan. Fanning is most effective. This may be alternated with the use of the towel. If the towels are heated, the process of drying will be shortened. Some establishments have machines for drying the hair which revolve a fan by electricity, and the air is heated by means of gas. To avoid the danger of taking cold, no wet towels should be permitted to remain about the neck; the back of the neck where the hair begins to grow, should have frequent and vigorous rubbings, and the hair should be dried there first. The ends of the hair are best dried by being wrung out together with the towel, which helps greatly to absorb the moisture.

If one is sensitive and likely to take cold after a shampoo, alcohol may be rubbed in at the back of the neck; it is not a good plan to rub it into the scalp as it takes away from the results of the shampoo, for the alcohol, when dried, gives a stale smell to the hair. Combing and shaking the hair help the drying.

The last process of all is straightening the hair with the comb. This should be done most care-



Plate XXIII.—SHAMPOOING THE HAIR—CONTINUED. A. Drying with a towel. B. Fanning to hasten drying. C. Straightening the hair with the comb.



THE HAIR

fully to avoid pulling it out, for the tangles are apt to be many and complicated. The comb should never be carelessly dragged through the hair, no matter when it is employed. If a particularly obstinate hair snarl is met with, coax it along until it is far enough away from the scalp for the lock of hair to be wound around the finger, and then any struggle in getting out the snarl will not pull the hair at the roots.

HOW TO MAKE THE HAIR GROW

As a general thing, the reason for the falling out of hair is due to lack of proper circulation in the minute blood vessels of the scalp. Soon the scalp loses its vitality. It becomes tense and shiny, and the hair follicles, from which the hair grows, are actually strangled out of existence. It has been asserted that baldness is due to the presence of a microbe. The microbe of baldness, if such there be, could not exist if the hair roots were properly nourished by a sufficient supply of blood. Hair tonics may be good to banish the impurities which clog the hair follicles and to destroy the microbes, and it is in this that their usefulness probably exists. Almost every hair tonic contains alcohol in some form, and this is an excellent disinfectant; quinine is added to stimulate the growth of the hair and to prevent its falling out. If the hair is

THE FOUNTAIN OF YOUTH

dry, oil should be added to the mixture. All tonics and applications should be rubbed into the roots of the hair, for if the long hairs are wet with any preparation of the sort, it makes them sticky, and the effect is unpleasant.

In most cases in which the hair falls, there exists a dryness of the scalp due to the inactivity of the hair follicles. It is well then to use the crude yellow vaseline. It sometimes has a better effect if mixed with an equal quantity of lanoline. This should be rubbed thoroughly into the roots of the hair. None of these things will avail unless used diligently and for a long time.

SINGEING AND CLIPPING THE HAIR

The hair will often show an unhealthy growth. The hairs become split at the ends and are split and torn in the length of the hair as well. It is easy to find out about the appearance of the ends of the hair. Take a lock and twist it somewhat tightly, and the unequal ends will rough up and show along the strand. They may be roughed up and made to stand out an inch or more from the twist, and then be easily clipped, but this should be carefully done, none but the hairs intended being cut, or the process will only make the hair more unequal in length. The ends should also be trimmed. If this is done too squarely, it makes



PLATE XXIV.—BRUSHING AND COMBING THE HAIR. A. The wrong way to use a brush. B. The wrong way to use a comb. C. Correct way to comb out tangled hair.

THE HAIR

it difficult to dress the hair without having an obstinate end at the finish of the coil or braid to deal with.

There is an old superstition that it is not an advantage to the hair to cut it, that "it makes it bleed." This is absurd. Those who hold such ideas recommend singeing the hair. It is a simple thing to do. If the hair is short it can be done by holding the ends of the hair in the fine teeth of the comb which has been combed through it until just enough to be caught in the comb remains. Across these ends the lighted taper is swept. If the hair is long, the lock is twisted as if for clipping, and the taper is run quickly over the ends. It requires some one very skillful to do this without burning off the long hairs as well as the short ones. The ends of the hair are easily singed without any danger of doing harm. The point of the whole matter is simply to clip or singe the ends of the unhealthy and split hairs, just as one would cut or prune an unhealthy plant, and it will, in the same way, promote the growth.

Brushing has often been recommended to stimulate the healthy growth of the hair. An expert ladies' maid is taught, first of all, to brush hair, in order to give the hundred strokes with the brush at night as her mistress is retiring. In the first place, if one is devoted to the brush, it should be

THE FOUNTAIN OF YOUTH

seen that it is perfectly clean, for it gathers impurities much faster than a comb. It should be cleansed first thoroughly with soap and water and then rinsed in a solution of a tablespoonful of borax to a quart of water, or in ammonia and water, the same amount to the quart. The brush should be dried as quickly as possible, or the bristles will be softened, for if one is going to use a brush, which is not at all a necessity, it should be stiff and, therefore, as effective as possible. If a brush is used wrongly it may become an instrument for raking out a number of hairs. It should be held so that all, or nearly all, the bristles of the brush are planted firmly on the scalp before the sweep is made to bring it down through the length of the hair. When this sweep is made, the brush should pass over as much of the scalp as possible, for it is at this point that all the good which comes from brushing is done. The stimulation that comes from the bristles acts in the same way as massage.

SCALP MASSAGE AND HOW TO DO IT

Scalp massage is the secret of keeping the scalp and the hair healthy. It is easily done and not a great tax either on time or patience. The hair-producing scalp is loosely attached to the underlying skull, as any one can prove with the fingers. When the scalp becomes adherent to the bones un-



PLATE XXVI.—A. Singeing the hair with lighted taper. B. Clipping the hair.

THE HAIR

derneath, and will not move easily, then the hair will fall and the healthiness of the hair follicles will become impaired. Therefore, one should have two ends in view : that of keeping the scalp perfectly loose and flexible upon its supporting framework, the skull ; and that of promoting the flow of blood to the roots so that the hair follicles will be properly nourished and the oily glands secrete their substance to keep the hair from growing dry and brittle. In order to do this only three movements of both hands in concert are necessary.

Before dressing the hair and when taking it down at night, loosen it by giving the ends of it two or three light shakes ; place the tips of the fingers of both hands at the juncture of the hair and the forehead and then work them with the circular motion gently but firmly towards an imaginary centre at the top of the head. At each turn of the fingers let them work lightly on the surface, and then deeply. The first motion is addressed to the hair follicles themselves, the next to moving the scalp on the head so as to make it soft, yielding and flexible.

The second movement is made by placing the tips of the fingers so that the forefinger of each hand will meet at the spot where the last massage left off. This will bring the fingers of each hand over an ear at the juncture of the hair with the skin. In the same manner as before, they should work

THE FOUNTAIN OF YOUTH

over the hair roots with light and deep massage until the finger-tips meet at the same centre at the top.

For the third movement of scalp massage, the fingers of each hand are placed so as to meet at the back of the neck where the hair begins, and, describing the same motions as before, they work themselves upward to the centre.

In this manner the entire scalp in less than five minutes receives a thorough stimulation. The hair responds at once and will be found to be full of life and electricity, where before it was lifeless and dull. It will also make the whole head feel lighter and better. This manner of caring for the hair cannot be too highly recommended; it is easily and quickly done, and will keep the scalp healthy and prevent the hair from falling.

THE CARE OF GRAY HAIR

One cannot be too thankful that we live in a day when one's own hair, let the color be what it may, is appreciated. It is disagreeable to wear a wig, for it is so hot and uncomfortable; nevertheless, the art of wig-making has progressed, so that if one's hair is thinned to any extent, a wig or a front piece, made natural both as to color and fit, will add greatly to the appearance of the wearer. Nature is a cunning artificer, and the color of the hair

THE HAIR

changes with the age of the individual to suit the color of the skin. If, when artificial aid is resorted to, this is not borne in mind, and the woman whose hair, blonde, brown or black in her youth, has turned a different color with the years, becoming gray or approaching it, should have a wig or front piece made of the color of her youth, it gives her face an unnatural look. This is the trouble in using hair-dyes. Half a century ago, women with good heads of hair would conceal their locks when they became gray, and would appear with a dark front piece, the rest of the hair covered with caps of marvellous construction. The heat must have been oppressive. The only advantage of a wig is that it is readily adjusted and that the time used in "doing up" the hair is saved.

At present gray hair is not only tolerated but is considered fashionable. Gray hair is like a white cloth; it becomes grimy very quickly. Perspiration also turns it yellow and makes it sticky. Gray hair has to be washed much more frequently than any other to keep it in proper order. Once a week or once in ten days is required. It can be shampooed after the manner already mentioned, but when it comes to the last rinsing, it looks much better if a little bluing is added to the water—not too much, for that gives it an unnatural tint—but just enough to make it look pure white.

THE FOUNTAIN OF YOUTH

Soft and fluffy gray hair often looks much better curled or crimped. If hot irons are used for this it will yellow the hair. It is almost impossible to do this with the curling irons without yellowing it permanently. It is therefore much better to do the hair up with papers or pins over night. If the iron is used at all, a very good effect may be obtained by weaving the hair on pins and covering the hair on each pin with tissue paper, before applying a pinching iron. Great care should be taken, also, not to have the iron too hot.

The use of curling tongs has been objected to as injuring the hair, but this is not the case if they are properly used, that is not too hot.

CHAPTER X

THE HANDS AND FEET

ONE of the great differences that distinguishes man from the lower animals is the possession of hands. Experimenters say that the more delicate and sensitive the hands and the fingers, the greater are the possibilities of educating the mental powers. In order to maintain his relation with the outside world, man has been endowed with the five senses of seeing, hearing, smelling, tasting and, lastly, with the sense of touch or with feeling. Touch is the most primitive sense, for the lower organisms of life have only this. Its susceptibility to cultivation in man is very great. Educated hands are instinct with life. As some one has expressed it, the tips of the fingers can be so cultivated that it seems as if there are eyes in them. The care of the hands should, therefore, be undertaken, not at the promptings of vanity, but because one's capabilities are increased and one's personal comfort is enhanced by their well-being.

PROPER CARE OF THE HANDS

The great problem in the care of the hands is the washing of them. So essential is cleanliness of the hands in most of the uses to which they are put,

THE FOUNTAIN OF YOUTH

that it was regarded by the Hebrews as a religious rite. Contamination and contagion are more often spread by unclean hands than in any other manner. Surgeons have found that, even after the greatest care has been taken in cleansing the hands, upon the outermost layer of the skin and under the finger-nails there still remain great impurities, as represented by the presence of many micro-organisms.

The use of rubber gloves to protect the hands when doing coarse work, especially that which necessitates putting the hands in water, such as scrubbing or dish-washing, saves the hands very much. These gloves are now easily obtained and are not so costly as formerly. The use of them will keep the hands from becoming rough and chapped, especially in winter, when the cold causes the hands that are much in water to crack and bleed painfully. Gloves should be worn in sweeping and gardening, and in all such occupations as render the hands very dirty, for the soap and water and scrubbing necessary to restore them to cleanliness will injure the skin, and it is well-nigh impossible to cleanse the nails after such labors. The old gloves that are worn should be large and comfortable. In every way possible save the hands in the washing process, as that renders the skin tough, coarse and red, and will cause the hands to chap and bleed.

Those who have to use their hands in rough work,



*P*LATE XXVII.—CORRECT MANICURING. A. Softening the nails.
 B. Important point in caring for nails. C. Trimming the nails with
 curved scissors.

THE HANDS AND FEET

beside protecting them with gloves, can do much to keep them in condition by the use of proper soap — one that has not too much alkali, which most scented soaps have — and by applying plenty of grease before drying them. White vaseline answers the purpose for the majority. It is well to have some always on the wash-stand, to be able to rub it in just before drying the hands. It is well, also, to grease the hands before putting on the gloves to work. The skin of the hands, exposed so much to the air and frequent washing, has more wear and tear than that of any other part of the body. Vaseline does not always agree with the skin any more than glycerine, which by itself can be used by few. A good preparation is glycerine, which has been diluted with water and rosewater in equal parts, or glycerine, rosewater and tincture of benzoin, one-third of each. The hands should be most carefully dried after washing. The use of almond meal is good in this process. The towels should be such as will absorb the moisture readily, those which are old and soft being the best. In the hurry of frequent washing, the hands are often left without thorough drying, and they soon become rough and blotchy and inflamed as a result, especially in cold weather.

THE CARE OF THE FINGER-NAILS

The finger-nails are for the protection of the sen-

THE FOUNTAIN OF YOUTH

sitive pulps of the fingers. Nature has made a neat little pocket in which the hardened substance is placed and fastened. The nails should be almond-shaped, and it is considered a beauty if at the base of each nail a little white half-moon appears. Some possess these moons naturally, and they will show even if the nails are neglected; in others, they can be recovered if the skin is pushed back properly at the base, while in many the moons are buried too deep for resurrection. If the flesh that surrounds the nail is not kept loose, hangnails will come. These are made by the stripping away of tiny bits of skin around the nail, and they frequently become very sore and painful. They should be trimmed carefully as close to the skin as possible. Small, curved scissors are best for this purpose. Hangnails can be avoided, however, if, as one cleans the nails, it is seen that the edge of the little pocket in which the nail rests is kept free. Much is said in books on the toilet about the possibility of keeping this edge back by rubbing it away from the nail when wiping the hands after washing, but this is of little use and may occasion hangnails. It should be loosened and kept loose by means of an orange-wood stick or the blunt point of a nail-cleaner.

During the preparation of this article, instruments for the care of the nails have been examined among those who are daily practising manicuring, and at the



Plate XXVIII.—CORRECT MANICURING—CONTINUED. A. Using the polisher. B. Loosening the cuticle. C. Filing and beveling the nails with emery board. D. Use of the nail brush.

THE HANDS AND FEET

shops where nothing but such appliances are sold, and at the leading dealers in surgical instruments. One and all show the same defects. Those used for cleaning the nails and pushing back the flesh from them are very sharp. All such instruments should be blunt. If, when cleaning the nails, the surface of the nails is scraped off, it will be much more difficult to keep them clean, as a roughened surface, which easily collects the dirt, has replaced the smooth one.

THE ART OF MANICURING

The condition of finger-nails depends upon the understanding of the proper way of manicuring. I have yet to find, after years of experience, one who makes a profession of it who understands the principles, for one unskillful performance will leave the nails in such a state that it will take them a long time to recover. With a little practice and education in using the left hand, one can do manicuring for one's self very easily. All the instruments needed are a good pair of slender, curved scissors that are sharp, some emery boards, which are sold for the purpose, a blunt-pointed nail-cleaner, more often found in pen-knives than anywhere else, and an orange-wood stick, one end pointed, not too sharply, and the other wedge-shaped. It is well to soak the fingers in warm, soapy water at first, to

THE FOUNTAIN OF YOUTH

soften the nails and the skin about them. The point of departure in all the proceedings is at the angle formed by the junction of the nail with the flesh, or, in other words, where the nail leaves the little pocket. In trimming the nail, round it up even from this place on each side. Much has been written upon the thickening and toughening of the nail by cutting it with knife or scissors. This is not true. It does not toughen the nail to cut it, and this is much easier to do than to use the file. An ordinary file, such as comes with manicuring sets, is not necessary. One is better without it. Also, the curved nippers are useless. Trim the nail, if it is long, with the curved scissors, and then, with the rough side of the emery board, it can be quickly curved, shaped and filed to the desired length. The edge of the nail can be further smoothed by the finer emery of the other side, and it may also be bevelled by this means.

The line of the finger-nail should follow the natural curve of the finger-tip, and should not be pointed in any case. Pointed nails are too suggestive of claws to be in good taste.

The next step is what the manicure calls "loosening the cuticle," by which is meant freeing the edge of the pocket in which the nail is held. Ordinarily, this is done by means of a sharp little blade called the cuticle knife. If one is not very careful, this



Plate XXIX.—CORRECT MANICURING—CONTINUED. A. *Final polish with the hand.* B. *Correct trim.* C. *White spots caused by improper manicuring.*

THE HANDS AND FEET

cuts the edges of the flesh or is dug into the surface of the nail. The point used should be blunt, so as not to destroy the selvage that Nature has provided. It should be lifted away from the nail, the point slipping down as far as it can be easily introduced, often an eighth of an inch. After it is loosened, the orange-wood stick may be employed to make it yet more free. If there are bits of skin adherent to the nail, they can be removed by means of the orange-wood stick, first dipped in water or vaseline. No violence should be used in any of these processes, for if it is, the nails will be bruised and the little opaque spots of white will appear. On no account trim the cuticle with the scissors. This leaves a raw, bleeding edge, which will give rise to hangnails and will permit dust and dirt to enter, and often the rim of the flesh about the nail becomes sore and swollen in consequence. It seems to be a mania with professional manicures to cut this edge. If there are inequalities and hangnails at the corners, which necessitate clipping with the scissors, even them with as little cutting as possible.

THE FINISHING-OFF PROCESS

Dip the fingers in white vaseline so that they will be well covered with it, and then wipe off most of it with a piece of tissue paper. Owing to the use of so much soap and water as is necessary in ordinary

THE FOUNTAIN OF YOUTH

hand washing, the nails often become ridged and brittle, a state which is very much helped by plenty of grease. If the nails are whitish, some of the colored unguents for the finger-nails may be used if desired. While a thin layer of ointment remains, the nails are covered with the polishing powder made for the purpose, and are carefully polished with the chamois-covered nail-polisher. Care must be taken not to knock the nail in the process, for that, also, will give rise to the white bruises. The fingers should be cleansed from the powder and grease by means of good hot soapsuds and a nail-brush. Then the orange-wood stick is again brought into use, and the nail itself, and the skin about it, are cleansed of powder or discoloration either by means of special preparations, or by a little lemon juice, or aromatic ammonia—one does as well as another. The final polish may be put on by rubbing the nails of one hand with the fleshy part of the palm of the other.

THE CARE OF THE FEET

The process of taking care of the nails of the feet is the same as that of taking care of the nails of the hands, carried to a greater or less extent as one feels inclined. The skin should be kept back from the nail in the same manner. The trimming of the nails of the feet is a matter of importance. They should



PLATE XXX.—A. Removing a corn. B. Bandaging the feet with adhesive plaster. C. Caring for ingrowing toe-nail.

THE HANDS AND FEET

be kept short and trimmed squarely across ; otherwise they will be pressed upon by the toes of the shoes and will wear holes in the stockings. If they are not cut squarely across but are rounded, pressure on the centre of the nail causes the ingrowing toenail, which usually occurs on the big toe. The nail becomes curved in its little pocket, and finally presses into the nail-bed. This is sometimes remedied by cutting a notch in the middle of the toenail, or by thrusting under the side of the nail a bit of cotton to force the nail up and outward.

The feet deserve much better care than usually falls to their lot. They should be bathed every day. If they are tired from overstanding or walking, nothing is so restful as a hot bath for them. If they are tender and tire easily, it is very restful to bathe them in alcohol. This will also prevent the unpleasant perspiration which many times gives a bad odor to the feet.

There is often great discomfort from walking and standing, without other apparent cause. This may be due to a natural or acquired flattening of the arch of the foot. It may be remedied by bandaging, or by wearing soles inside the shoe which are made to correct such a deformity.

ABOUT CORNS AND BUNIONS

Corns and bunions usually appear as the result of

THE FOUNTAIN OF YOUTH

wearing shoes that do not fit properly, that are either too large or too small. From pressure or irritation the skin becomes hardened, and callous places occur. When these layers of skin are more condensed, they form a corn ; that is, a callous spot with a hard centre that acts like a foreign body to irritate and inflame the spot. The callous places are found most often on the bottom of the foot, while the corns occur on the toes. In bathing the feet, one should take care to remove all of this layer possible by rubbing it off with the fingers and scraping it off. Great relief can be found when these places occur on the soles of the feet by strapping the foot with adhesive plaster, being sure that it is put on smoothly and without wrinkling. The perspiration and moisture thus occasioned soften the callous spots so that they will disappear. Cutting corns is a most reprehensible practice. The skin will become thickened in the end, and the corn will have to be treated often by the chiropodist. With an instrument having a blunt point, such as the nail-cleaner or the scissors, sufficiently sharp to introduce under the skin at the circumference of the corn or calloused place, raise it just enough for the thumb and forefinger to get hold of it, and then peel it carefully off. The entire corn may be thus removed after the feet have been soaked in hot water for a time. The little kernel should also be

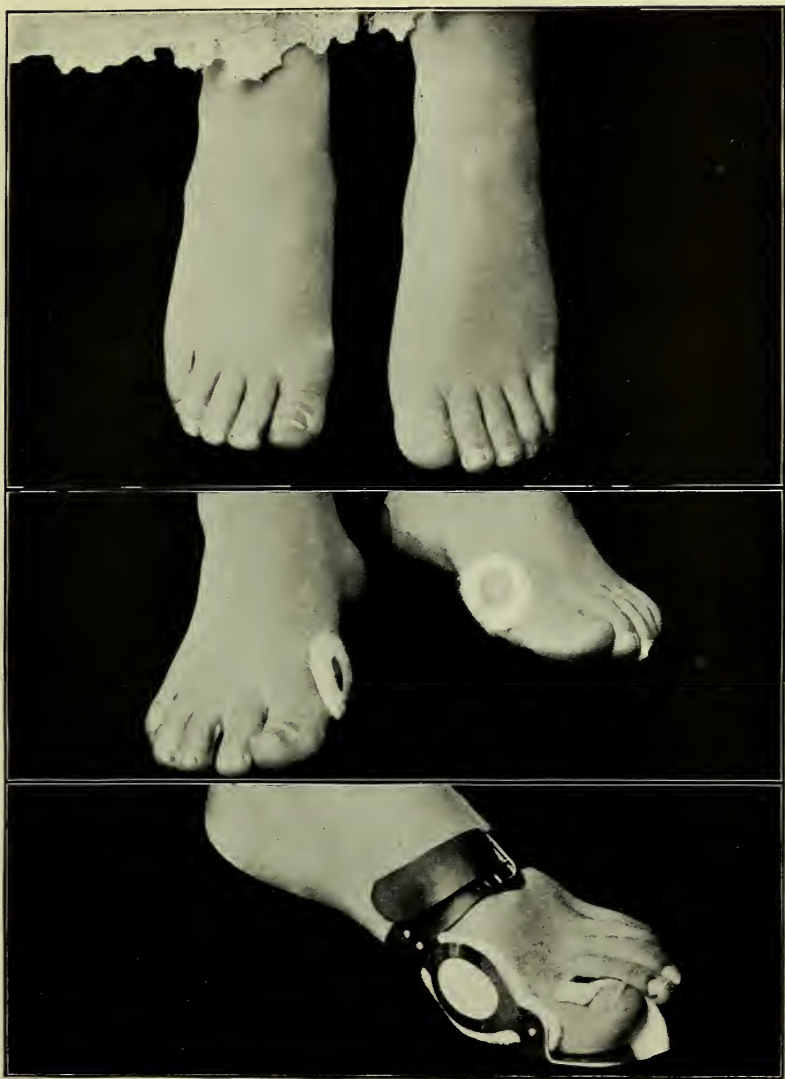


PLATE XXXI.—A. Correct trim for toe-nails. B. Bunion and corn plasters. C. Instrument to remedy bunions.

THE HANDS AND FEET

removed. Then paint the surface with collodion, to which ten drops of *Cannabis Indica* has been added to the ounce or ten grains of salicylic acid. A little piece of kid glove, cut to fit, with a hole in the centre the size of the corn, is a good corn protector. To avoid soft corns, keep the skin between the toes perfectly dry.

Bunions are the result of wearing shoes with high heels and those the inside line of which, instead of being straight, curves outward, forcing the toes of the foot out. The big toe-joint thus takes the pressure of the boot and becomes enlarged, inflamed and very painful. To correct this, the big toe must be turned towards the middle line again. Sometimes a pledget of cotton placed between the tips of the big toe and the next one will accomplish this. An instrument has been devised for this purpose, and may be worn at night. It acts as a lever upon the big toe to bring the joint back into its natural position.

CHAPTER XI

THE USE AND ABUSE OF COSMETICS

FEW think of cosmetics as a science, much less as a science belonging to the medical profession, but such it is and so it is recognized by the oldest authorities. Dr. Pashkis, of Vienna, speaking of how little has been written about cosmetics from a scientific point of view, says: "The physician is wrong in overlooking the study of the science of cosmetics, for with a knowledge of this he cannot only be of service to patients who suffer from slight blemishes, but he can also guard them against dangerous experiments."

There is a right use of cosmetics and a wrong use of them. Certain substances are deleterious in themselves and ought never to be employed, while others are of great benefit. It has been shown in these chapters that, in general, whatever interferes with good looks is also detrimental to the health. It is, therefore, as much in the interest of health as of looks that one should study cosmetics.

The subject is almost always approached in an apologetic manner. A Renaissance physician writ-

THE USE AND ABUSE OF COSMETICS

ing on "Cosmetics for Women" justified himself by saying in his preface: "One is but doing right and pleasing God, in treating of the beauty which He has given, and in trying to improve upon it by art." The reason for this attitude of apology is because cosmetics have been used for two purposes, one right and legitimate, the other meretricious. The first of these purposes, the removing of blemishes and the improving of the condition of the body and consequently the appearance, may be unreservedly commended, but the other, the use of substances to improve upon nature, as the person fondly imagines, is wrong, as it produces artificiality.

FACE PAINTS

In nothing more clearly than by the use of face paint is the effect of custom shown. The incongruous patches of all colors with which the Indian war-chief decorates his face is an illustration of this. The women of the eighteenth century were invariably rouged, and many men followed their example. In Spain and Portugal rouge was applied by young and old, by rich and poor alike. While all used rouge, women of the different classes applied it differently, the peasantry using but little, the court lady painting her face to excess. Even young girls thus decorated their cheeks, and — a singular thing — they did not confine their patronage

THE FOUNTAIN OF YOUTH

to red alone, but one week would use a violet tint, and another week still another color. They even rouged when going to bed. It is said that those who did not paint looked very odd. So it is, after all, a matter of fashion as to what method of face painting is considered becoming and what is not, the Indian on the plain having one standard and the court beauty of Louis XIV another.

Just now the tinting of the face and the lips is considered admissible only for those upon the stage, where the art of "making up" is as necessary — if not more so — than that of elocution. Carmine obtained from the red coloring matter of the cochineal insect is the basis of almost all rouge, whether it be in liquid form — one part of the carmine to five or six of ammonia — or used in a powder or paste. Now and then a misguided woman in good society tints her cheeks to replace the glow of health and youth. A greater mistake could not be made. The artificiality of the effect is apparent to every one, and calls attention to that which the person most desires to conceal, the evidences of departed youth. The changes of fashion are slow and insidious. It hardly seems likely that a time will ever again come in which rouge will be well-nigh universally employed, but until that time does come a person could not make a greater mistake than to use it upon the face. It renders the skin

THE USE AND ABUSE OF COSMETICS

harsh and dull, if persisted in, blocking up the pores and interfering with the capillary circulation.

HAIR-DYES

Among cosmetics used since the earliest times are hair-dyes. The mother of the first king of Egypt invented a hair-dye. The women of the East dye their hair with henna. Roman women, after the invasion of the Germans, admiring the blonde locks of their conquerors, began to dye and bleach their hair. In the sixteenth century the women who bleached their hair dried it on the terrace tops of the houses, wearing hats without crowns, and with broad brims over which the hair was spread, the brims meantime protecting the faces of the wearers from the sun. A kindly fashion makes the women of to-day accept their gray hairs, if not more willingly, at least more gracefully than did those of old. I have been told, nevertheless, that so extensive is the use of hair-dyes, even at the present time, that a great fortune awaits the inventor of a perfect one.

The trouble with coloring the hair is that it is impossible to make the hair follicle (the root of the hair) take the coloring matter, and as the hair is constantly growing its roots soon show the difference of color. Some cases have been reported by a physician in which the hair has turned from gray

THE FOUNTAIN OF YOUTH

back to the natural color after taking pilocarpine, the drug having been used as a remedy for disease. I do not know that experiments as to this drug have been conducted on a large scale. Hair-dyes make the person who uses them conspicuous, and unless there is some marked peculiarity of the hair, the looks are not improved. As a general thing the dyes are injurious to the hair itself. Such certainly is the peroxide of hydrogen so generally used. It requires some time to restore the hair after the peroxide has once been employed, as it dries and takes the life out of the most luxuriant locks. The vegetable hair-dyes are not injurious, but those made of lead, nitrate of silver and copper salts are dangerous, more especially those which have a basis of lead. On account of their poisonous action, their sale is forbidden by law in Germany and Austria. Often in past times the hair has been so injured by the use of these various applications that wigs have come into fashion.

EVERY-DAY COSMETICS

The legitimate cosmetics are not very numerous, and they need not be bought masquerading under fanciful names. Those which are most in use have a regular basis, say of alcohol, glycerine or some acid, if they are in liquid form; or, if in powders, of two or three simple and well-known substances,

THE USE AND ABUSE OF COSMETICS

to be presently mentioned. The perfumes which are employed as such are not, properly speaking, cosmetics, but they enter into many of the preparations used, and whatever virtue they have is due to the alcohol as well as the essential oils which they contain. Alcohol owes its beneficial action largely to its antiseptic properties. It is of great benefit to the skin, cleansing, hardening and invigorating it. It is of benefit in hair-tonics because of its stimulating effect. The use of perfumes is a matter of custom. Some people are inordinately fond of them, while the same odors may have a most disagreeable influence upon others. The greatest care should be taken in regard to them, as it is considered ill-bred to use them in excess. Like every other rule of propriety, this one is based upon the relation of the individual to others. The delight of one person may mean the discomfort of another—even amounting to nausea when certain substances are used for perfuming. I know of one young lady who lost several friends because they could not tolerate a heavy extract which she was accustomed to use with great prodigality. The penetrating, persistent odor of musk is exceedingly offensive to many people; it is not putting it too strongly to say it should never be used, even though liked by the individual. It is said of the Empress Josephine that she was ex-

THE FOUNTAIN OF YOUTH

ceedingly fond of musk, and that her room, though repeatedly painted and scraped, still exhaled that odor forty years after her death. No cosmetic should be heavily perfumed. Clothes may be scented with lavender, orris root or the delicate odor of the best violet extracts. Only cologne carefully made by well-known perfumers should be selected. Colognes vary much, some of them being compounded with substances which leave, after the evaporation of the alcohol, a very persistent and disagreeable smell. It is said that nearly all perfumes have as a basis a very small amount of ambergris, musk or civet to render permanent the other odoriferous substances. Skill in compounding perfumes consists in securing the right admixture; if there is too much of these lasting, penetrating scents the result is a strong, persistent after-odor which may be very disagreeable.

Toilet vinegars are not as much used in this country as in France, but they are very useful and pleasant. They are made of acetic acid (vinegar) perfumed with some ethereal oil, and are disinfecting, cleansing and render the skin smooth. One of the best cosmetic agents known is the lemon. It should be constantly upon the toilet stand. It cleanses like soap, it removes stains, it smooths the roughened skin, and is especially good to use upon the neck when it is blackened and roughened by a high col-

THE USE AND ABUSE OF COSMETICS

lar. Cut into strips it can be used to wash a furred and coated tongue. It cleanses the finger-nails, removes their stains and softens them better than the acids of the manicure. Finally, as lemonade, the juice of a lemon acts most beneficially upon the system as a corrective of gouty and rheumatic conditions, and as an aperient.

Glycerine is very much used for various toilet purposes. It is said to soften and add lustre to the skin and to relieve it of its imperfections. It is employed as a basis in many of the proprietary preparations for sale by druggists. It permeates animal tissue very readily and therefore makes a good medium. Because of its drying properties it does not agree with all skins. It should be diluted with water when used.

POWDERS AND LOTIONS

Powders are used for absorbing the fat and moisture of perspiration. The number of powders made and sold which have contained deleterious substances has brought the use of all powders into disrepute. Powders should be used with reason. When constantly employed and too much is used at a time, they cause the skin to lose its healthy color and tone and clog up the pores. It is essential that a harmless powder be used. The best is rice powder, but it is said that is difficult to obtain and that

THE FOUNTAIN OF YOUTH

there is very little pure rice powder in the market. Talc, chalk and starches are used to adulterate it or as substitutes for it. Besides filling up the pores, the powders mixed with perfumes, when acted upon by the perspiration, swell up and macerate or irritate the surrounding tissues. Orris root used to perfume powders, harmless as a general thing, is said to act in this way in the powdered form, especially when used upon the feet.

Wheat bran, marshmallow powder, almond meal and bean meal are used to soften and beautify the skin. These are sometimes made up into pastes and ointments and replace powders. When the object of powders is to beautify the skin and conceal its imperfections, other substances are added, such as bismuth, zinc, lead, arsenic and carbonate of magnesium. Many of the powders offered for sale include one or more of these substances. Lead and arsenic are as injurious in this form as when used in lotions. They irritate and poison the skin. I have used bismuth frequently in applications for skin troubles with great benefit. Its prolonged use and rubbing it into the skin, it is claimed, gives rise to irritation, though of a milder degree than those produced by the other substances mentioned. Bichloride of mercury (corrosive sublimate) is used in powders, lotions and ointments. It bleaches the skin, removes moth patches and other discolorations

THE USE AND ABUSE OF COSMETICS

and is said to enter into the composition of many preparations in the market. The quantities used should be very small, otherwise it is dangerous and for this reason should not be resorted to indiscriminately.

Borax is harmless and added to water renders it soft and pleasant for bathing and is good for the skin. Benzoin made into a tincture and added to rose-water in the proportion of a teaspoonful to the ounce makes the celebrated *lait virginal*. The balsam of tolu is used in the same way. Preparations of sulphur, while adding to the beauty and softness of the skin, either in the form of a lotion or an ointment, are not popular on account of their odor. If used too strong or too long, they give rise to an irritation of the skin. In using applications of sulphur, it should be remembered that it takes some time for their action to be complete. They are best applied at night, and when washing the face in the morning some soothing lotion should be used, as water with borax or almond bran.

OILS AND OINTMENTS

Fatty substances are of use to the skin in that they render it soft and pliable — “feed the skin,” as the expression is. They keep the skin from becoming harsh and dry. Fats of some kind or other form the basis of the unguents, salves and ointments for

THE FOUNTAIN OF YOUTH

sale in such great quantities. Before the discovery of vaseline, lard was the principal fat used. It was kept sweet by the addition of benzoin and hard by mixing it with paraffin or white wax. Lanolin, the fatty substance made from the wool of sheep, has been used of late. The ancients appreciated the oily substance found in the hair. It is said that they sometimes dried their hands upon the hair of a boy's head. Lanolin is best when mixed with almond oil or vaseline. Cocoa butter is not so agreeable because of its odor. Almond oil and olive oil are often used. All these fatty substances form the basis of ointments made for cosmetic and curative purposes, and they are so numerous that it would take a book to review them all. What has been said with reference to other preparations will indicate sufficiently those that are injurious.

IN CONCLUSION

It is difficult to treat so wide a subject in so short a space, and we have purposely refrained from dwelling on those cosmetics which have received attention in previous chapters. The end for which this chapter has been written will be accomplished if it serves to prevent its readers from using preparations the composition of which is unknown to them, many such containing that which is positively injurious; if it has shown that the requirements of

THE USE AND ABUSE OF COSMETICS

the toilet table are simple and easily obtainable without being labelled with fanciful and enticing names; if it discourages foolish and useless attempts to increase personal attractiveness by resorting to unskilled and unprofessional people, who impose on the credulity of women wistful to make the most of their good looks; if it has shown that it is not necessary to suffer to be beautiful, but it can be attained by becoming healthful and strong through judicious means; and that the best cosmetic of all is a lovely, cheerful, intelligent spirit, which acts ever and unceasingly to embellish its tenement of clay.

CHAPTER XII

BODILY SYMMETRY

IT belongs to the artist to know that the body should measure just eight heads, this unit being reckoned from the point of the chin to the top of the head; also that, to be in proportion, the height of the body should be exactly the same as the distance from right finger-tip to left finger-tip of the widely extended arms, but these are matters which do not come within the possibility of alteration by the individual. It makes a difference, however, in the matter of growth with the human plant as to whether the surrounding conditions are favorable or not. Light, air, the right amount of exercise—not too much exertion and not too little—and above all a supply of nourishing food are necessary to promote a proper growth, and parents should see to it that their children have these. After one has reached adult life, he cannot add to his stature; but the fat and muscle, the softer tissues, which give form and grace to the human frame, can be increased or reduced by diet, massage and exercise, and the different parts of the body brought into pleasing symmetry.



PLATE XXXII.—A. Exercise for grace and poise. B. Exercise for development of chest and bust; first position. C. Second position.

BODILY SYMMETRY

THE DESIRED WEIGHT

It is difficult to lay down definite weight for definite height, or rather it is not practical to do so, for the weight may be supposedly correct, when it is due to disproportional amounts of fat in one part of the body or another. Roughly approximating, a woman should weigh from one hundred and twenty pounds to one hundred and fifty, according to her height ; that is, from five feet to five feet and a half. The point is to have the flesh distributed evenly and symmetrically. It often happens that a woman does not weigh too much, but that her extremities are thin and flesh is deposited either about the bust or about the waist, hips and abdomen, in a way that takes from the symmetry one would desire. It is easier for one who is thin to acquire flesh, than it is for one who is fat to get rid of her superabundance. Unfortunately, the one who has much flesh and is the victim of an increasing corpulency has an appetite for all that goes to increase her flesh and also a disinclination for exercise. Those who are thin can cover up much of their deficiency by the manner in which they dress.

Diet is the great question for those who are of extreme weight. It will usually be found that it is the lack of appetite for the suitable kinds of food that makes people lose the avoirdupois which they possess. Those who wish to gain flesh should eat

THE FOUNTAIN OF YOUTH

much and often. Milk and eggs are great fat producers. Drink milk with meals instead of water; drink it between meals, so that three pints or two quarts are consumed during the day. Add eggs to your meals and to the milk when taken between meals. One can easily take half a dozen eggs a day. If one has a distaste for them, they may be swallowed whole as one would take a large capsule of oil; or if preferred, take them soft boiled, or dropped or lightly scrambled. The oils and fats will increase the flesh. Butter is a great fattener. Butter everything thickly, bread, vegetables, meats, everything that offers an excuse for eating it. Olive oil is another fattener. Some can take a tablespoonful after each meal very easily. Cod-liver oil is not so easy to take as butter and olive oil, and does not agree so well with the stomach. It can be taken after meals; if a little ginger ale is drunk at the same time, it helps the digestion and takes away the taste of the oil. Certain proprietary emulsions have been found excellent for increasing the flesh. Cod-liver oil is not so good in summer. The fats that are served at the table in the way of butter, olive oil and fat meats will go a long way toward helping the thin. Bread is fattening, and all the cereals and breakfast foods, if taken with cream, will greatly increase the flesh. Cream by itself, unless it taxes the stomach too much, will increase the



Plate XXXIII.—EXERCISE FOR LENGTHENING THE WAIST-
LINE AND REDUCING ABDOMEN. A. First position. B. Second
position. C. Third position.

BODILY SYMMETRY

flesh the same as the oils. Indulgence in sweets, sugar, candies, cakes, adds to one's weight. The bills of fare for the thin should include potatoes and other root vegetables as well as peas and beans. The thin are happy since, if they are well, they can partake and enjoy all kinds of food without feeling that by such indulgence they are adding also an undesirable and disfiguring amount of flesh.

CONCERNING THE CORPULENT

It should be remembered that it is natural for the young to be slender and thin, and that as a woman increases in years she takes on weight. The woman who sees that she is growing stout should take counsel with herself before it is too late. To prevent the accumulation of flesh is much easier than to get rid of it when it has once formed. Fat not only interferes with the looks, but tends to disease. Fat is a degeneration of the tissues. When it is in any way burdensome the breath becomes short, one is incapable of exercise, and fat may be deposited about the heart and in the heart muscle and interfere with its action. Unless there is actual disease the accumulation of flesh indicates that one is eating more than the system needs to carry on its work, and the surplus is stored away as fat.

Many regimens have been invented in order to reduce flesh, an extended consideration of which is

THE FOUNTAIN OF YOUTH

reserved for another chapter. One and all of them cut down the amount of food to be consumed daily from one-third to one-half of that which is ordinarily allowed as necessary. In some dietaries it is recommended to drink very little fluids and almost no water. Others think that a large amount of water increases the changes in the body which destroy the fat. The diet should be the reverse of that which has just been recommended for those who are thin. Avoid fats and oils, avoid sweets, cereals, eggs, cream and butter. Avoid the starchy vegetables, which are generally those that grow in the ground. Many get fat from the bread-and-butter habit. A physician told me that many of his patients had reduced their flesh greatly by simply abstaining from bread. Eating bread offers employment between the courses, when one has nothing better to do. One, however, should bear in mind that indiscriminate dieting is not without its dangers. For some people it is natural to be fat, and to reduce the food sufficiently to make any change will be detrimental to the health. Another matter should also be borne in mind that, after the self-denial of pursuing a diet to decrease the flesh, one is very likely to add flesh quickly if not careful when resuming a more extensive bill of fare.

Well-directed exercise is the best means for pro-

BODILY SYMMETRY

moting bodily symmetry. It does this by developing the muscle structures, increasing the circulation and the aeration of the blood. One should enter upon a systematic course with an intelligent idea of what is to be accomplished. There are very many useful exercises that can be taken without apparatus for the development of the body. It is not possible in a limited space to discuss very many of these. In order to get any benefit from a special exercise one should be persistent. It does not take long to do it morning and night, when dressing and undressing, and five minutes' practice regularly at these times is much more valuable than the hour two or three times a week at a gymnasium or class. It is the little day by day, that accomplishes the result. It is well to have some one interested or skilled in physical culture to look you over and tell you what you need. It may be that chest and bust are poorly developed and you wish to improve yourself in these respects. One of the simplest and easiest exercises for this consists in doubling up the fists as tightly as you can, bringing them together in front with the arms raised so as to be horizontal. While keeping the arms on a level with the shoulders, slowly separate the fists as widely as possible. This exercises and develops the great breast muscles as well as those of the shoulders and the back.

THE FOUNTAIN OF YOUTH

Massage by gently raising the mass of the breasts from the chest wall will develop the bust. Also dash hot and cold water alternately upon the breasts. Any pressure tends to flatten the breasts, so that if one wear forms of any kind, they should be made as light as possible; a framework of wire or whalebone that will not press anywhere is best. One should be careful in using any nostrum, or methods of which one is not sure, for the purpose of enlarging the breasts, as they are delicate in structure and are easily injured. For large, heavy breasts the massage should be very gentle pressure against the chest wall, smoothing them out from centre to circumference. Heavy breasts should be supported, because they will drag away from their attachments and become pendulous. Sometimes bandaging the breasts will reduce them in size. This is best done by a straight piece of stout linen or cotton, which, passing under the arms, is wide enough to come just below the breasts. This may be pinned with small safety-pins straight down the front and then be made to fit by taking up the slack on each side and pinning it together in the form of a bias. A strap passing over each shoulder and pinned back and front will hold it in place. The pressure should be firm and even over the whole surface and should not give pain or discomfort.



PLATE XXXIV.—EXERCISE FOR STRENGTHENING AND DEVELOPING MUSCLES OF THE TRUNK. A. First position. B. Position for second and third movements. C. Fourth position. D. Fifth position.

BODILY SYMMETRY

EXERCISE FOR DEVELOPING THE TRUNK MUSCLES

A very good exercise for giving poise and symmetry to the whole body is that of standing erect, with the chest thrown out, extending the arms horizontally to their full extent, and, while holding the arms thus firmly in position, twisting the hands upon the wrists.

Many exercises have been devised for lengthening the waist and rendering the body pliant and supple. The following series of exercises is as good as any, and when it is tried it will be seen how it not only exercises the trunk muscles but brings into play those of the rest of the body as well :

The hands should be placed first back to back, while the arms hang loosely in front. The arms should then be gradually raised to the second position, bringing the hands in front of the chest, and at the same time gradually rise upon the feet ; then spreading, raising and straightening the arms, bring the hands above the head, with the fingertips of the hands touching easily together ; at the same time rise still further upon the feet until standing as much on the toes as is possible and still maintain the balance. This exercise gives great grace and suppleness to the whole figure and is very easily done.

Another exercise designed to bring the muscles

THE FOUNTAIN OF YOUTH

fully into play, especially those of the sides and the back, is as follows :

The first movement is to interlock the fingers of the hands with the palms outward, the arms stretched in front as straight as possible and the body bent forward. With the fingers still locked, bring the arms up so as to encircle the head, and then bend the body as far as possible first to one side and then to the other. Next carry the hands, still locked together, high above the head. This puts all the muscles of the trunk on the stretch. The last movement is to carry the arms as far back of the head as possible, while keeping them still firmly extended.

THE REDUCTION OF ABDOMEN AND HIPS

Massage can be of great use in the reduction of the abdomen and hips. The rollers made of rubber, which are sold for this purpose, are also serviceable ; but there is nothing like exercise for accomplishing the best results. Unhappily, the stouter one gets, the less one is inclined to exertion. The exercise about to be described is highly recommended by one who has had much experience in giving and directing exercises for flesh reduction and the improvement of bodily symmetry. She states that it has reduced the hips two inches in a month. When beginning it, one should be careful



*P*late XXXV.—EXERCISE FOR REDUCTION OF HIPS AND ABDOMEN. A. First position. B. Second position.

BODILY SYMMETRY

to get used to it very gradually, as it puts a great strain upon the muscles and is liable to make one as lame, as a first horseback ride. One should lie extended upon the floor, supporting one's self by one hand, while the other is placed upon the hip. While holding this position, raise the body gradually from the floor until the whole weight is supported by the hand and feet. It is comparatively easy to get the body from the floor as far as the knees, but to bring it up to the full extent just described is not easy at first. It should be tried first on one side, and then on the other.

A very good exercise for the reduction of the abdomen, is that of throwing the hands above the head with the palms outward, the arms extended and the body thrown back as much as possible, and then, bending forward at the waist, keeping the knees straight and trying to touch the floor with the fingers. It is difficult to do without bending the knees. The following exercise is much easier and is very effective. One lies extended full length upon the floor with the feet together and the arms folded upon the breast. Raise first one leg, stiffly extended, and then the other. This will strengthen the muscles of the lower extremities. The third movement, which is a very simple one, is to bring the legs, kept closely together, into a position as nearly as possible at right angles with the body.

THE FOUNTAIN OF YOUTH

It takes some time to describe these exercises, but after they have been learned, it will not take long to do them ; each should be repeated a certain number of times daily. The great point in order to attain beneficial results is to be faithful in keeping them up persistently.

CHAPTER XIII

OBESITY

“O H, that this too, too solid flesh would melt!” is the exclamatory desire of many. No one seems contented with his or her avoirdupois. People may be divided into two classes — those that think they are much too fat, and those who think they are much too lean. The happy condition where the weight is just right does not seem to exist. Weighing machines, whether labelled “correct weight” or not, are always suspected of inaccuracy for the reason that the result indicated does not accord with the wish of the individual. Thinness does not border on disease. Emaciation is a symptom of many of the diseases which afflict the human race and disturbs the balance of nutrition ; but the accumulation of fat is a condition which in itself may terminate in a disease that will result seriously. Corpulency is due to the deposits of fat about the tissues ; but when the fat becomes incorporated into the tissues themselves the result is fatty degeneration, which destroys the functional power of muscle and of organ. The most common example of this and the

THE FOUNTAIN OF YOUTH

most serious is fatty degeneration of the heart. The fat is deposited in the muscle itself, rendering it incapable of its pumping action. The blood is no longer propelled through the body, and the result is malnutrition and death.

HOW AND WHY FLESH IS GAINED

The inherited tendency to flesh is great. If your father and mother or your grandparents were persons of rotundity, or, as the expression goes, "it runs in the family" to be fat, it will be very difficult for you to avoid becoming fat, for whatever may be the opinion in regard to the transmission of mental and moral qualities, the inheritance of physical characteristics is most marked. The desire for certain foods is also inherited, as well as the tendency of the tissues to transform the nutrient materials into fat. People who are fleshy do not always have a great appetite, but they have a great desire for the kinds of food which make fat. They love sweets and starchy foods. It is the fat man who does not need such things that drinks milk by the quart, that consumes eggs and quantities of bread and butter and loves the puddings and sweets of the dessert; while the thin little woman will not take eggs, for they make her bilious, nor milk, for it does not agree with her, and she does not like sweets.



*PLATE XXXVI.—EXERCISE FOR REDUCTION OF ABDOMEN
AND STRENGTHENING THE LOWER EXTREMITIES. A.
First position. B. Second position. C. Third position.*

OBESITY

It generally happens that the stouter one is getting the more the appetite improves. Fat is seldom the trouble of children or youth unless the tendency towards it is inherited. The reason of this is that the system needs much more food while the body and its organs are developing. When the balance of growth is attained and the duty left to the organs is that of function alone the amount of nourishment required is much less ; but the habit of eating a certain amount has been formed and the desire for certain rich and fat-producing foods has been acquired, with the result that more nourishment is taken into the body than is needed and the surplus is stored up in the body in the form of fat.

Lack of exercise is one of the chief reasons for the accumulation of flesh. As one gets older the occupations become more or less sedentary, and, the appetite still remaining good, as much is eaten as ever. For the obese exercise is difficult, but when flesh is gaining slowly and surely day by day, as it does upon its victims, the inclination to move or walk or to undertake any diversion which requires effort becomes slowly extinguished, and it is not noticed how much less of movement and action is indulged in until the powers are considerably lessened. Then the effort to exercise becomes almost too much for the will of the individual.

THE FOUNTAIN OF YOUTH

DRINKING AND INCREASED WEIGHT

The amount of fluid has much to do in increasing flesh. Alcoholic drinks promote digestion and cause the storing up of fat in the tissues. This is especially the case with malted liquors, such as ale, beer and porter. The use of the different kinds of mineral waters will also increase the flesh. In many systems which have been devised for decreasing the weight very little fluids are allowed. Water is limited in the Schweninger system to five ounces—about a small tumblerful—and this can be taken only three times a day. The idea of decreasing the amount of fluid is that one cannot eat very much if he does not drink while eating. Milk is used sparingly if at all. Even soups are not allowed, nor are succulent fruits and vegetables.

On the other hand Germain See regards drinks in obesity as beneficial. He does not recommend alcoholics, though wine diluted with a little water may be taken; and he requires his patients to drink hot weak tea in quantity. He prohibits starches and sugars but allows meats and fats. Yeo, also, recommends hot water and hot aromatic drinks and allows light wines in moderation. The idea in taking plenty of fluid is that it promotes tissue changes and the waste is carried out of the system instead of being stored up in it.

The Weir Mitchell cure for obesity is likewise



PLATE XXXVII.—A. Correct position in standing. B. The running exercise.

OBESITY

based on this idea. He gradually replaces all food with skim milk, which is given in quantity. The one who takes the treatment is put to bed and given massage and Swedish movements. The treatment lasts from four to six weeks. The flesh is reduced in this way very rapidly, so rapidly that the patient has to be put to bed and carefully watched. Sometimes a small quantity of beef, chicken or oyster soup is allowed to vary the monotony of the skim-milk diet.

DIFFERENT SYSTEMS

The study of the different dietary systems that have been invented for the reduction of flesh is enough to bewilder the brain of the corpulent. The French and the German physicians have been most active in inventing these regimens, and they are as varied as possible. The question of drinks which we have just been reviewing is but an example of it; one says that you must not drink even three glassfuls of water a day, and another says drink all the time quantities of hot water or skim-milk. So it is with the different systems of foods; one will allow sugars and starches, and another will withhold fats. Nevertheless there is an unanimity in regard to one point — the amount of food allowed is very much less than that taken by an ordinary individual. The comparison of a half a dozen of

THE FOUNTAIN OF YOUTH

these tables shows that the amount is reduced from one-half to one-third.

The various systems unwittingly display a most striking and instructive truth — namely, that corpulency should be reduced in accordance with the individual peculiarities, that to give one person a diet of one kind of food might reduce his flesh, while it would increase the flesh of the next. The quantity of food should also be adjusted to the person ; in one case a very little will be needed to meet the wants of the individual ; the remainder is stored up in the system, and so in the course of a year considerable flesh is accumulated. Other persons who need more nutrition and who undertake the restricted diet of Banting or Oertel reduce the system to such a condition that they are much worse off than when they began to lessen their flesh. It is dangerous to restrict the amount of fluid in some cases, as the kidneys are unable to perform their work in consequence. The German systems have been severely criticised for this, and a number of cases of trouble have been reported. While it is interesting and suggestive to consider these systems which have been invented for the relief of obesity, it should be stated distinctly and emphatically that persons should not experiment too much or too widely without advice.

All foods that are taken into the system are classi-

OBESITY

fied, as albuminates—foods containing albumens, such as meat and eggs; fats—butter and lard and the fatty part of meats; or as carbo-hydrates—foods that contain starch and sugars. According to Playfair, a normal diet should be about four ounces of albuminates, an ounce and a half of fats and fifteen or sixteen ounces of carbo-hydrates, that is, bread and vegetables—about twenty-two ounces of solid food in the twenty-four hours.

MÉNU À LA BANTING

Mr. Banting, the Englishman, was in truth a great man. He weighed in 1862 two hundred and two pounds and reduced himself in the course of the year to one hundred and fifty-six pounds. He has received all the fame, although his physician, Dr. W. Harvey, outlined the course for him. It is no more than just, however, that he should be regarded as a hero, as he deprived himself of good living and ate only about one-third the amount allowed other people. The process of flesh reduction has been called ever since “banting.” The following is the bill of fare for the day :

BREAKFAST, at 9 A. M. :—Five or six ounces of meat or boiled fish (except pork or veal); a little biscuit or an ounce of dried toast (an ordinary slice of bread half an inch thick weighs about two

THE FOUNTAIN OF YOUTH

ounces); a large cupful of tea or coffee without milk or sugar, equalling nine ounces of liquid.

DINNER, at 2 P. M.:—Fish or meat (avoiding salmon, eels, herrings, pork and veal) five or six ounces (about the amount of an ordinary helping; or, instead of the above, any kind of poultry or game); any vegetables except potato, parsnips, beets, turnips or carrots; cooked fruit unsweetened; ten ounces of good claret, sherry or Madeira. (I quote as the authority gives it. It would seem that he allowed wines very liberally, in comparison with the other articles of food, but this may be the reason why he was able to sustain himself on so little solid food.) The total of solids is from ten to twelve ounces.

TEA, 6 P. M.:—Cooked fruit—two to three ounces; a rusk or two; two to four ounces of solids; nine ounces of tea without milk or sugar.

SUPPER, 9 P. M.:—Meat or fish as at dinner, three or four ounces; claret or sherry and water seven ounces.

At the time that Banting published his experiments in dieting his regimen was widely followed, greatly to the injury of some who were not well enough to stand it.

THE GERMAN BILL OF FARE

Ebstein's method for reducing flesh had a great

OBESITY

vogue in Germany, until it was superseded by that of Oertel, which was afterwards made famous by Schweninger, Bismarck's physician. The latter's modification of the Oertel system was the complete suppression of drinks at meals; whatever fluids were allowed should be taken two hours after eating. Ebstein allowed a much greater proportion of fats than Banting, with the idea that it sated the appetite and so less other food was desired. His regimen was as follows:

BREAKFAST, 6 A. M. in summer, 7:30 A. M. in winter:—White bread (rather less than two ounces) well toasted and well covered with butter; eight or nine ounces of tea (about two cupfuls) without sugar or milk.

DINNER, at 2 P. M.:—Soup made with beef marrow; fat meat with fat sauce—about four or five ounces; vegetables (asparagus, spinach, cabbage, peas or beans); two or three glassfuls of light wine (white); after the meal a large cupful of tea without milk or sugar.

SUPPER, at 7:30 P. M.:—An egg, a little roast meat with fat; about an ounce of bread well covered with butter; a large cupful of tea without milk or sugar. The fat and the tea enable the partaker to stand the very limited amount of food.

The Schweninger or Oertel cure, which is now the fashion in Germany and which has been adopted

THE FOUNTAIN OF YOUTH

to a certain extent in other countries, has met with considerable success from the fact that it treats the condition of obesity from different standpoints and not alone from the diet. It aims to improve the muscular tone of the heart. This is done by enforced exercise, such as climbing hills. The patient walks slowly up the ascent until the heart palpitates, at which point he stops, but he must not sit down; when he breathes easily again, he continues the exercise. He is to walk several hours a day, climbing as much as possible. He should go up and down-stairs at intervals, by way of exercise. It is claimed the normal composition of the blood is preserved by the diet, which was formulated with this in view. More fat and more starchy food is allowed than in the Banting system. The difference from Ebstein's in regimen is the allowance of twice as much starchy and albuminous foods and half as much fat.

The Schweninger or Oertel bill of fare is as follows:

MORNING:—A cupful of tea and coffee with a little milk, altogether six ounces; three ounces of bread.

NOON:—Three to four ounces of soup; seven to eight ounces of roast beef, veal, game or not too fat poultry; salad or a light vegetable; a little fish, cooked without fat; an ounce of bread or farina-

OBESITY

ceous pudding (never more than three ounces); three to six ounces of fruit, fresh preferred, for dessert. If it is hot weather or no fresh fruit is eaten, six to eight ounces of light wine may be taken.

AFTERNOON:—The same amount of coffee or tea as in the morning, with at most six ounces of bread as an exceptional indulgence.

EVENING:—One or two soft-boiled eggs; an ounce of bread, perhaps a small slice of cheese; salad and fruit; six to eight ounces of wine with four or five ounces of water.

It is hoped that this explanation of the various bills of fare for the reduction of flesh will not be without its use. It is not that they are recommended, but they display more strikingly than could be done in any other way the principles upon which the reduction of superfluous flesh is carried out. Think of only a small slice of bread or toast for breakfast or a half a slice at one meal; take away bread and water from a meal and you will see how little else you eat. All writers insist that the cause first, last and almost all the time of the increase of flesh is over-eating. More is consumed than the body needs, and the half ounce of surplus of to-day added to the half ounce of to-morrow gives a result of great weight to the individual before he or she is aware of it.

THE FOUNTAIN OF YOUTH

ACCESSORY MEANS OF FLESH REDUCTION

The diet is more than two-thirds of the treatment, but the other means are very necessary and some of them are more agreeable. Exercise, as incidentally mentioned in the description of the Schweninger cure, is of the greatest importance, and the massage and the Swedish movements are of much advantage. The massage should be given by a capable operator and should be directed to stimulating the liver and the abdominal regions. Percussion along the spine and across the small of the back is recommended, together with vigorous flexing of the thighs upon the body, to strengthen the abdominal muscles. The use of baths has been found to be very valuable, especially vapor baths followed by the use of the douche upon the body and the spine. The douches are given in force represented by the fall of water from different heights. In the first method the effect would be the same as of water falling a distance of thirty feet, in the second sixty feet, and in the full strength ninety feet. The first is called a pressure of one atmosphere, the second a pressure of two atmospheres and the third a pressure of three atmospheres. According to a high authority the douche as ordinarily applied has little effect in reducing flesh. The temperature should be in direct contrast to the temperature of the skin. A temperature of 70° Fahrenheit should be tried for a

OBESITY

minute the first time, and then the patient should rest five minutes. Then a douche of 60° may be tried with a pressure not exceeding one atmosphere. Five minutes should then elapse before the third douche is given, and this only to vigorous people. If full reaction has taken place, the last douche may be given at 50° or even 40°. No harm will ensue at the latter temperature if the douche is given in the form of a spray with a pressure of three atmospheres. When the patient's reactive temperature is ascertained a lower temperature may be begun with each vapor bath.

MEDICATIONS

The result in the use of medicines for the reduction of flesh has been far from satisfactory. After flesh has once accumulated it is very difficult to reduce it without detriment to the general health, and after the penance of flesh reduction has been endured in the way of enforced exercise and the following of rigid dietaries, the relaxation of vigilance is accompanied not only by the regaining of the former weight but also by the addition of more. When returning to a normal diet one should be very careful to increase the amount of food slowly and carefully and not to lose all the benefit by a reckless carelessness.

The thyroid gland of the sheep, generally taken

THE FOUNTAIN OF YOUTH

in compressed tablets of five grains each three or four times a day has been extensively recommended to reduce flesh. These preparations are apt to upset the stomach and affect the heart, and should not be taken indiscriminately. A physician thought he had found a means of flesh reduction in the use of vichy and Kissingen waters, drinking alternately one kind one day and another the next. The experiments made with this method under my observation were without results, and similarly ineffective are the other medical preparations on the market which are extensively advertised and recommended.

CHAPTER XIV

PHYSICAL CULTURE

THE necessity of bodily activity to health and muscular development is based upon the underlying principle of existence,—man is a working machine. A state of inactivity brings about degeneration of his mechanism and results in disease. If he does not work, he rusts out. The conditions of modern life are such that the individual is developed only in one direction, that is along the line of his chosen work, and his bodily health suffers in consequence. In attempting physical culture each person should consider the conditions in which he spends his life and should adjust his exercise to develop all the parts of the body that are left inactive during the daily round and common task.

CONDITIONS GOVERNING PHYSICAL DEVELOPMENT

To illustrate this, take the case of the blacksmith. The right arm is developed immensely from the use of the heavy hammer that he swings while at work. In order to make both his arms equal in size and power he would have to take especial pains to give

THE FOUNTAIN OF YOUTH

the fellow member something like the same amount of work. The clerk bending over his desk all day needs very different exercise from the postman who, footsore and weary from constant tramping on his rounds, needs to rest his lower extremities and develop the upper part of his body. Physical culture is, therefore, the study of how to build up the whole organism in such a manner that every part of the body shall be as perfect as it is possible to make it.

In laying out a course of exercise one should study the body with a view to determining that which is necessary for correct development. It would be a great advantage, if one were able, to have an expert in these matters make an examination with a view to giving advice as to what course it is well to pursue. This is now generally done in schools and colleges. Before taking any heavy course of gymnastics or athletics, the heart should be examined to see how much strain it can bear without being taxed too severely.

This chapter has not for its object the discussion of training for sports, or it would give a serious warning against the danger of heart strain, which has caused the physical break-down of many who have indulged in them, and fatal results to not a few. The heart, which is nothing more nor less than a great muscle, can be very much improved in its action by certain exercises taken with moderation and in-

PHYSICAL CULTURE

creased as the heart becomes accustomed to them. Among these may be mentioned going up-stairs and hill-climbing. In the cities, where in business offices and dwelling apartments elevators replace stairs, many people become disqualified for this kind of exercise. Moreover, there is a popular prejudice against going up and down-stairs. Practice enables one to go up and down a flight of a hundred steps as easily as a dozen, and it is most excellent for the heart and lungs, if properly done.

EVERY-DAY PHYSICAL CULTURE

Correct understanding of the acts of motion in every-day — one might say every moment's — use is necessary in order to prevent fatigue, to promote grace, to develop symmetry. Standing, walking, and running, as well as ascending stairs, are very beneficial from the point of view of physical culture. In going up-stairs one should poise oneself firmly upon the ball of one foot while giving the upward spring of the body necessary to bring the other foot to the level of the next step. The speed with which one climbs the stairs should be regulated so as not to bring too great a stress upon the heart and lungs. If the heart palpitates and it is difficult to get one's breath, wait until breathing is easy once more and the heart has become quieted before going on. This is true of all ex-

THE FOUNTAIN OF YOUTH

ercise. As the muscles become trained to their work, whatever it may be, the demand on heart and lungs becomes much less, and therein consists the advantage of physical culture.

Very few persons, who have not been trained, stand properly. If one wishes a test as to her correctness in this matter, let her take a moderately heavy book and place it on top of the head, and balance herself to carry it easily. The head will come in a line with the rest of the body, the chin will be drawn in, the chest will be thrust forward and the stomach back, the knees will be straightened and the heels placed together. How different is this form from the slouching attitude which so many habitually take. The head is poked forward, the chest caves in, the stomach protrudes, so that the contents of the abdomen are thrust upon the abdominal walls instead of being carried in the bony structure and supported by it, as is intended, and the abdomen becomes pendulous and unsightly. The knees are bent and uncertain and the feet fall apart. Much as such a posture lacks in grace and detracts from the comeliness of the figure, this is less to be considered than the effects of the pose upon the health. The lungs cannot be inflated properly, and the internal organs lose their natural and proper support.

Walking, almost the commonest act of life, is



*P*late XXXVIII.—THE ACT OF WALKING. A. First position.
B. Second position.

PHYSICAL CULTURE

likewise seldom properly done. As in standing, the chest should be expanded and carried well forward, as if a rosette were upon it, which had to be supported and carried there. Balancing firmly upon one foot so that ear, shoulder, hip and ankle come in a straight line, the walker should extend the other foot, the toe touching the ground first and the foot coming quickly into a position of support as the body is swung forward for the next step, the supporting foot in its turn rising from heel to toe to be swung forward. Walking as a means of locomotion and walking as exercise are two different things. In order to make walking beneficial as an exercise, it should be done quickly and briskly with some vigor, so as to bring into play the muscles of the upper part of the body; the arms should swing, so that the circulation may be stirred.

RUNNING AND DANCING

Running is a most excellent means of developing the muscles of the whole body. One does not need to have space in which to do the running, for going through the motions of running in one spot answers very well. Considering this, it is an excellent exercise to take upon retiring or getting up in the morning. The fists should be clinched tightly while the motions are gone through. The speed with which this localized running should be prac-

THE FOUNTAIN OF YOUTH

tised depends upon the power of the individual to keep the breathing free and easy.

Many exercises recommended are unsatisfactory in that they do not tend to an all-round development. In the devotion to physical exercise in these later days—it almost amounts to a craze—the number of exercises that have been invented are legion. It requires much intelligence and discretion to make a proper selection. The old-fashioned calisthenics tended to improvement of bodily poise, ease and grace in movements. One of the best means of acquiring these qualities is dancing. Children should be taught the graceful measures when young, for in dancing one loses the self-consciousness which makes one awkward in using the muscles of the body. Dancing is also an excellent exercise; the drawback is, however, that it generally takes place in a heated, crowded room, while in order to get the greatest benefit, exercise should be taken out of doors in the free air. The advantage of physical culture is that it teaches the importance of inhaling pure, fresh air. An unfortunate feature of gymnastic work is that it takes place in a room instead of out of doors.

EXERCISE IN THE OPEN

Out-of-door games have become more and more popular. The best of all is golf, as it combines

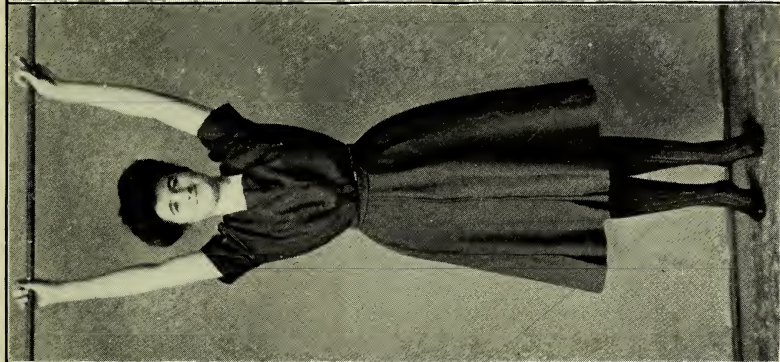
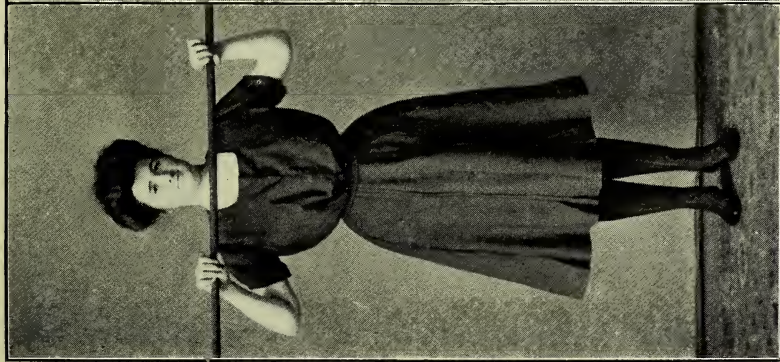


PLATE XXXIX.—EXERCISE WITH BAR-BELLS. A. First position. B. Second position. C. Third position.

PHYSICAL CULTURE

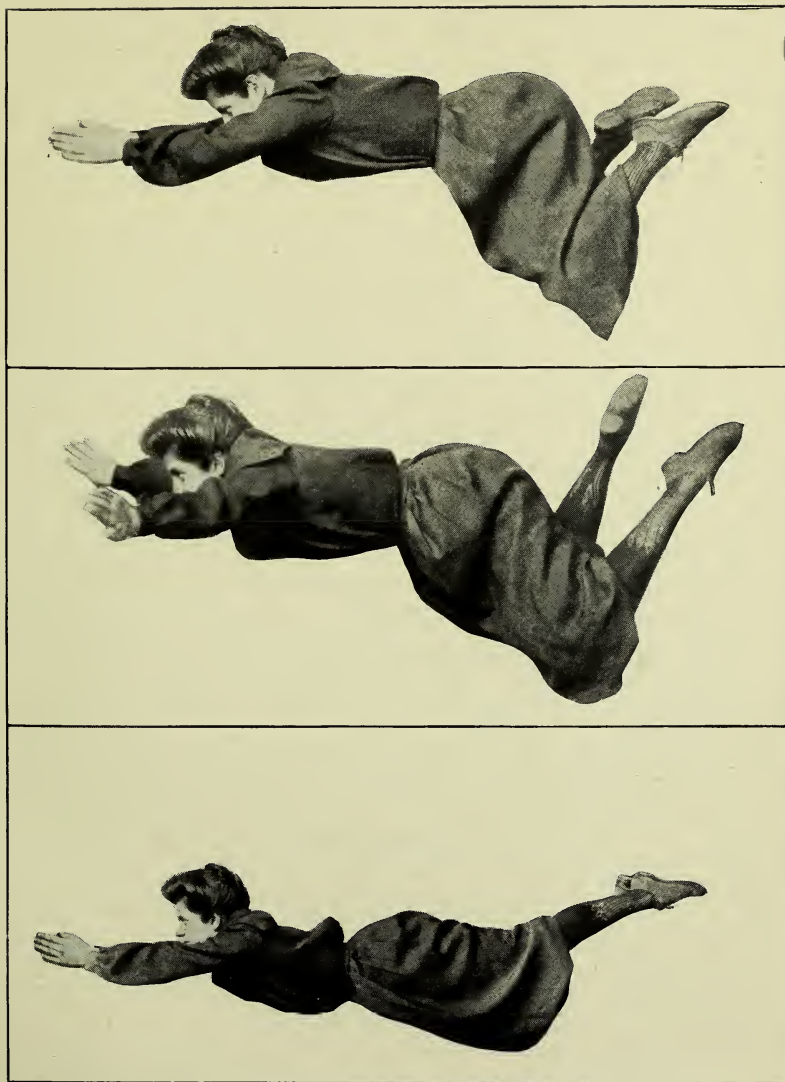
walking with an exercise that is not or need not be too arduous; and the pleasurable excitement of rivalry in the game, unless playing for a championship, is not intense but satisfying. Croquet has little or no element of physical culture in it, except that of keeping one out in the air. The bicycle is a great promoter of health. The sensation of getting so easily from place to place, and the diversion of thought from one's self and one's troubles to the matter of preserving an equilibrium, are especially beneficial to nervous, sedentary people. If one is not strong and needs out-of-door life, the trolley cars provide a great field of enjoyment; by that I mean taking long trips by trolley cars into unknown parts of the country. The trolley lines of New England afford delightful excursions. Driving tours, automobile trips, and, above all, walking tours are most relaxing and gratifying in providing the changes that are necessary to break up a treadmill existence. To the old-fashioned—and who will say that they are not right?—there is nothing like the exercise and delight that horseback riding can give. The horse has been the companion of man for so long a time that the relation that exists between them is peculiarly strong. For one who lacks a good constitution, a capital recommendation is to get upon a horse and ride forth like the knights of old in search of that greatest and most

THE FOUNTAIN OF YOUTH

precious of riches, health. If he cannot have a horse, let him take the bicycle, or, if that fails, use his own feet; leaving the impure, germ-laden air of the cities, let him seek the shores where the waves of the ocean break, or the forests where trees of centuries' growth toss their branches, or make his way through the valleys, and to the tops of hills and mountains. It is in this way that the Fountain of Youth is discovered.

SWIMMING AND ROWING

For all-round muscular development, swimming has no equal. It calls into play all the muscles of the body, of the head and especially of the neck, the extremities and the trunk. For the benefit that the exercise gives, every one should practise swimming when it is possible, as well as for the safety which it will insure in case of accident upon the water. The art of swimming may be acquired easily in childhood, and the fortunate ones who are naturally able to preserve their equilibrium, whether upon stilts, on a bicycle, or in treacherous water, will take to the motions naturally. It would be much better for learners generally, however, if those who instruct them would recognize the fact that one who does not know how to swim or float can go to the bottom very easily, instead of insist-



***P**LATE XL.—Showing how swimming develops all the muscles of the body.*

PHYSICAL CULTURE

ing, as instructors usually do, that their pupils cannot drown if they try; and with this in view, it would seem wise for the latter to acquire the motions of swimming in the first place. With the hands extended, the fingers and palms pressed together and feet drawn up under the body as if in the act of kneeling, the beginner takes the first position, being supported by a friendly hand placed beneath the chin. In the next position the hands should be spread out as if pushing the water back, while describing a circular sweep, and the legs should at the same time separate with a frog-like motion, after which comes the third and last position, that of complete extension of upper and lower extremities with the hands and feet brought together. It must be remembered that the head should be thrown well back between the shoulders. It is necessary to become accustomed to the water, and to learn how to take the waves in surf bathing. The latter kind of bathing has a peculiar electricity, that is stimulating and life-giving. One who is delicate should not stay in the water too long; about twenty minutes is the limit.

Rowing is the best exercise for developing the chest and the muscles of the arms. It may happen that one is debarred from taking exercise which involves walking or the use of the lower extremities, and in such a case rowing is the exercise *par excel-*

THE FOUNTAIN OF YOUTH

lence. It keeps one in the open, and develops the lungs, and the muscles of the arms, while, unlike tennis, it gives symmetrical development. The trouble with tennis is that it is a one-sided exercise, unless one can use the left hand as well as the right — which is unusual. I have seen tennis players with the right shoulder, arm and chest muscles so enlarged as to show a decided difference between them and those of the left side.

INDOOR ATHLETICS

With a teacher and regular instruction, one is more likely to keep at the work of physical development, whatever it may be. There are a number of home exercising apparatuses that have been devised, but they offer little advantage over the exercises without apparatus which have been described. The practice with dumb-bells and Indian clubs of varying weights has gone out of fashion, as it has been demonstrated that as good results can be obtained without them, when the tension or contraction of the muscles is brought about through voluntary exertion in what are called “resistance” exercises. A very good exercise, however, is that of the bar-bells, the balls of which are very light. A broom handle will do almost as well. The first position is taken by grasping the stick lightly in the hands, and holding it on a line with the shoulders,

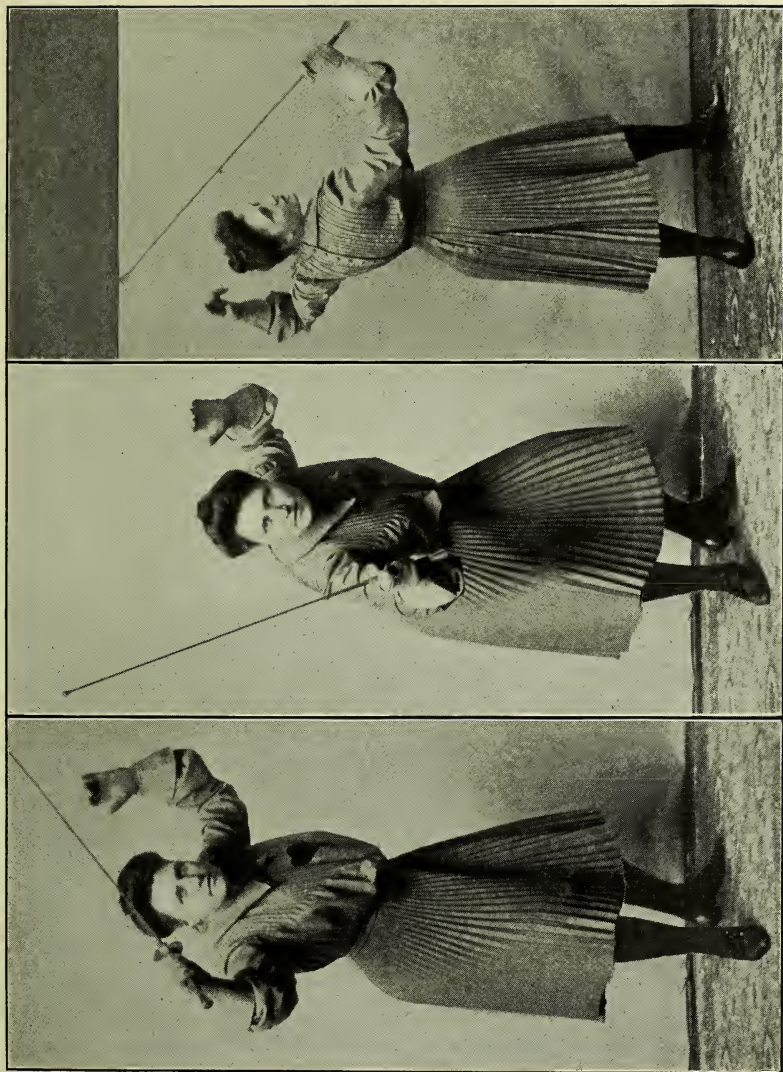


Plate XLI.—CHARACTERISTIC POSITIONS IN FENCING. A.
The salute. B. The lunge. C. The recovery.

PHYSICAL CULTURE

as one raises oneself partly upon the balls of the feet. While continuing to rise, at the same time, lifting the bar, until standing upon the toes, the bar is carried as far as possible above the head ; and then, settling back once more the feet coming to the floor carry the bar behind the head to a position as far away from the neck as possible. The latter motion puts a strain upon the chest muscles and those of the arms, and it requires a great deal of practice to do this easily and without feeling the strain too much.

Fencing has been taken up by many ladies in recent years. It has some advantages over the more ordinary exercises, in that it gives those who acquire skill in it a dexterity and quickness of movement that would be difficult to attain in any other way, except possibly by sword practice, and it trains the eye as well. It would require many illustrations to show the changes of position in salute, defense and attack, and to render apparent the spring and agility required in their practice, but fencing is highly recommended to those who have the opportunity of learning this fascinating pastime, which carries with it the flavor of other days in the quaint French names by which its different movements are still known.

CHAPTER XV

DRESS

THE importance of correct dressing can scarcely be over-estimated from the point of either good taste or hygiene. The study of one's own figure and complexion in their relation to suitable and becoming attire is a duty, not a vanity.

Some women are born with the right sense of proportion and a true eye for color; these are described by their admiring friends by one word, "stylish," which often means more than good looks. Few are aware of their lack of taste in dress. If any lurking suspicion of such a deficiency in equipment for life is entertained, one should go to some friend who is known for her talent in this direction and ask her opinion in the matter. If by such an inquiry the conviction is brought home that a natural lack exists in this direction, means should be taken at once to overcome it. The art of dressing can be cultivated as truly as love for good music and good pictures. Now, there may exist a few who are entirely helpless in this respect; such should secure the services of a trustworthy person

DRESS

who will assist them in the selection of their dress and adornments. The effect of dress upon others is little realized. It is an interesting psychological study to watch the countenances in any place of gathering — a hotel piazza, an assembly, a party or ball — when a lady dressed charmingly and harmoniously appears. Faces brighten as if looking upon some pretty flower.

It is not expense that tells in clothes, necessarily, but it is what is expressed by the phrase "taste in dress." Not that which is fussy, elaborate or over-trimmed, but that which is an artistic whole, simple though it may be.

If women would only realize how necessary it is to dress suitably, considering their means and occupations, it would be a step in the right direction. Fashions that are appropriate to people of wealth and leisure become ridiculous for those who have work to do. On the other hand, it is well at once to give up the idea that one can bid defiance to the prevailing mode; a certain obedience to the dictates of fashion is necessary, and it is not well for one to earn the title of "peculiar."

HYGIENE IN DRESS

The faddist and extremist revel in exploiting ideas in regard to feminine garments. It requires common sense to determine which is the best.

THE FOUNTAIN OF YOUTH

Men have in a great measure emancipated themselves, and as the years go by, the discomforts and frivolities in women's dress become less, for the education of women, both physical and mental, tends towards this. Nevertheless, one may sometimes see women go through the streets dragging their skirts as they walk, sweeping up microbes and impurities and carrying diseases into their homes. Unless women drive they should not go out of their houses in long skirts. It is said that the magistrates of Prague have ordered a fine for all women wearing trailing dresses on the street, and certainly nothing is so detrimental to appearance as expensive finery that is soiled and draggled. The advocates of rainy-day costumes have been helped by the fact that golf and bicycle-riding cannot be indulged in without short skirts. It is with satisfaction that one notes the tendency of fashion to return to short skirts and simple tailor-gowns for walking, the long skirt being reserved for house and evening wear.

Both as a matter of looks and of health waists and skirts should be fastened to each other. Many inventions have been placed on the market which are excellent to accomplish this; but a simple and a satisfactory way of securing the result is to sew three loops of tape, or three tags in which button-holes have been worked, one of which is placed in

DRESS

the middle and the others at the distance of an inch on each side. At corresponding distances on the waistband of the skirt strong buttons are sewed ; these buttoning into the fasteners on the waist, hold the skirt and waist together firmly, and also prevent the dragging weight of the skirt, which alone will often give rise to serious backache.

SOME POINTS ABOUT HATS, GLOVES AND NECKWEAR

Some women are wise enough to know that the key-note to their appearance is given by their head-gear ; and there is no article of dress which when ill-chosen can make a woman look more ridiculous. One must believe that the future will hold a day of reckoning for those milliners who sell to unsuspecting customers the impossible fabrications of lace and straw and flowers and flaunting feathers that are frequently seen. Use all means possible to get becoming hats and bonnets, and be not content with the specious front view, but take a hand-glass, so as to be sure that the side and rear elevations do not border upon the grotesque. A very necessary requirement in a hat which has nothing to do with the appearance is its weight. A heavy hat, especially in the summer, is very wearisome and will give headaches. Heavy hats, too, are bad for the hair. When a hat rests upon the forehead at its junc-

THE FOUNTAIN OF YOUTH

tion with the hair it will cause the hair to fall out, and the hair, becoming thinned, may not grow again. The custom of going without a head-covering is a very good one, stimulating the growth of the hair.

In selecting gloves, one should be careful that they fit properly. A glove, especially one of kid, if too large looks slovenly and untidy. A glove that is too small interferes with the circulation of the blood. Some women are foolish enough to cling to a number too small, as if it made the slightest difference in the appearance of the hand. Indeed, a glove too tight makes the hand seem larger than when the glove fits easily. Tight sleeves also interfere with the circulation and may enlarge the veins of the hands.

Tight collars and bands around the neck are likewise an abomination, for the large arteries that carry the blood to the brain pass up on either side of the throat and are easily compressed by them. If a person has a stout neck and a full chin, the chin is pressed up and looks badly when the neck-wear is at all tight. The low evening bodice is more and more worn, in spite of all that may be said against it from an ethical or hygienic standpoint. If such is the practice, the one whose shoulders and neck are displayed should be most careful to harden herself so that she will not easily

DRESS

catch cold. The throat and neck should be bathed daily in cold water, the water being dashed upon the parts freely. The covering for the neck in the daytime should be light, so that too sharp a contrast will not be made between day and evening gowns. Many colds are taken because of this change to lighter clothing in the evening when the dampness and chill of night demand heavier protection.

WOMEN'S UNDERWEAR

It is natural for women to delight in confections of lace and fine linen, and if the purse permits there is no reason why they should not indulge their tastes. Regard should be had for the laundress in these matters, from the standpoint of her time and work, and also for the clothes on account of wear and tear. Underclothing should not be heavy, so that one is dragged down by the weight of it. In regard to the clothing next to the skin, the body is best protected when clad equably from the neck to the heels, including the arms. Women are apt to be weighed down by wearing too many petticoats. The short, shrinking little flannel skirt should give place to drawers. One has a choice in undergarments of wool pure or mixed more or less with cotton, or of all silk. Those who are rheumatic or much exposed to the weather find comfort in the fine

THE FOUNTAIN OF YOUTH

woollen garments which have been brought to such a perfection in recent years. One should not become accustomed to too heavy underclothing in a variable climate. An out-of-door thermometer should be examined and clothing lightened or made heavier to correspond with its reading. Those who live in furnace-heated houses in which the temperature during the winter is that of summer should dress accordingly, wearing heavier garments and outer wraps when going out. Silk is the most agreeable of all underwear. It does not scratch. A lighter weight gives the warmth of the heavier woollen. It may be merely speculative to say so, but it seems to conserve the electricity of the body better. Women should always wear closed drawers as a protection from cold.

THE QUESTION OF CORSETS

It is the custom for all writers on hygiene to decry the corset. Undoubtedly it is capable of great mischief if put to wrong purposes or improperly fitted. The practice of tight-lacing is the most harmful that can be indulged in, and is so little conducive to an improved appearance one wonders that it is ever done. Who cares whether a woman's waist is an inch or two smaller or not? In fact, who will know it? One may look neat and trim without pulling the corset



PLATE XLII.—EFFECT OF HIGH HEELS UPON THE FEET.
 (Photographed through glass.) A. Natural position of naked foot when standing. B. Photograph of both feet taken together, and with high heel shoe, the other naked, supported at the same height.

DRESS

lacings too tight. This worse than silly practice has given corsets a bad name. The present dress makes a corset requisite for most women, especially those who are inclined to be stout. The old-fashioned corset, if worn at all tight, was most pernicious. The straight-front corset of to-day, if worn correctly, may be of benefit. In fact, physicians and surgeons are recommending it in cases where formerly an abdominal bandage was used. The straight-front corset that is permitted to ride up out of place and to press upon the contents of the abdomen is likely to do harm, and will cause the wearer pain and inconvenience. The corset should be brought well down, so as to clasp about the hips, and the first hook when fastened is below the abdomen. If the latter is large and protruding, it can be raised up so as to be supported by the corset. An easy way of adjusting it is to clasp the corset while lying down. The laces should be loosened while putting on the corset, and drawn together comfortably afterwards.

STOCKINGS AND SHOES

Garters attached to the corsets to keep the stockings in place are much better than the old-fashioned garters encircling the leg either above or below the knee, as these interfere very seriously with the cir-

THE FOUNTAIN OF YOUTH

ulation, even if only worn tight enough to hold the stockings in place.

Stockings that are either too narrow or too short cramp and push the toes together, curling them over one upon the other, so that the joints are made to knuckle and the rubbing of the shoes or slippers forms corns. In the same way trouble occurs if the shoes are too short or too narrow. When one is on the feet much of the time or doing much walking, boots with broad soles are much the best, as they afford a support for the ankles, which become swollen when low shoes are worn.

Heavy soles should be had for walking. Women are apt to take cold in winter from wearing low shoes. The stockings are thin and the instep unprotected.

The evil that is likely to come from the shoes of the present day lurks in the heels. Even the ordinary walking-boots and shoes are provided with exaggerated heels. In order to make them possible for walking—that is, bringing the toe and heel on the same level—the portion of the sole between the ball of the foot and the heel has to be very much arched. The result is that the natural arch of the foot is exaggerated and the muscles become strained, giving much pain. Such shoes should have the heel taken off, so that it is not more than an inch high, and the curving sole will then be straightened.



Plate XLIII.—EFFECT OF HIGH HEELS—CONTINUED. A. Side view of feet shown in Figure B, Plate XLII. B. Walking shoes with heels that press up the arch of the foot.

DRESS

If the natural position of the foot is contrasted with that which the high heel compels the foot to take, it will be seen how most of the weight comes on the ball of the foot. The higher the heel, the greater the pressure on the toes and the joints. It is so great that it turns the joints out of position. It is in this way that bunions are formed from wearing high heels.

In order to demonstrate this, photographs were made through glass to show the exact pressure upon the sole of the foot in standing and walking. First I had the feet taken without shoes or stockings bearing the whole weight of the body. It could then be seen that the whole sole of the foot bore the weight of the body with the exception of the arch, and that the foot was not spread in any part by the weight of the body. In the next place another photograph was made in which one foot was clad with a stocking and high heeled shoe, the other foot was naked, but supported by a piece of wood simulating the heel of the shoe, having the same height and placed under the foot in the same position which the other occupied. Thus it was possible to show the effect of the high heeled shoe upon the foot in standing or walking. The weight of the body was not then supported by the whole plantar surface, but only upon so much of the heel of the foot as the size of the top of the heel of the shoe,

THE FOUNTAIN OF YOUTH

but the main support was thrown forward upon the joints of the toes formed by the junction of the toes with the bones of the feet. The foot at this point was spread widely, forcing the joints out of position and thrusting the big toe joint so much out of position, that one wearing habitually such shoes could scarcely fail to have a bunion. The whole equilibrium of the body was thus changed. It is not surprising therefore that headaches and eye-strains should follow the adoption of such foot-gear, or that spinal difficulties and disturbances of the internal organs should result.

Another imperfection often seen in a boot is that the inside line, which should be straight, curves outward, thus turning the big toe towards the others, and throwing the big-toe joint into prominence, so that a bunion is likely to be formed.

One seldom considers that gait is a matter of fashion, but it is. In the time of hoops and farthingales a short, waddling step was the mode, and the affectation known as the "Grecian bend" will be remembered by many.

The turning of the toes out in walking is not so much dwelt upon as formerly. The ungraceful toeing-in should, of course, be avoided, but the angle made by bringing the heels together and turning the toes out, military fashion, need not be practised so industriously as old-time precepts dictate. The

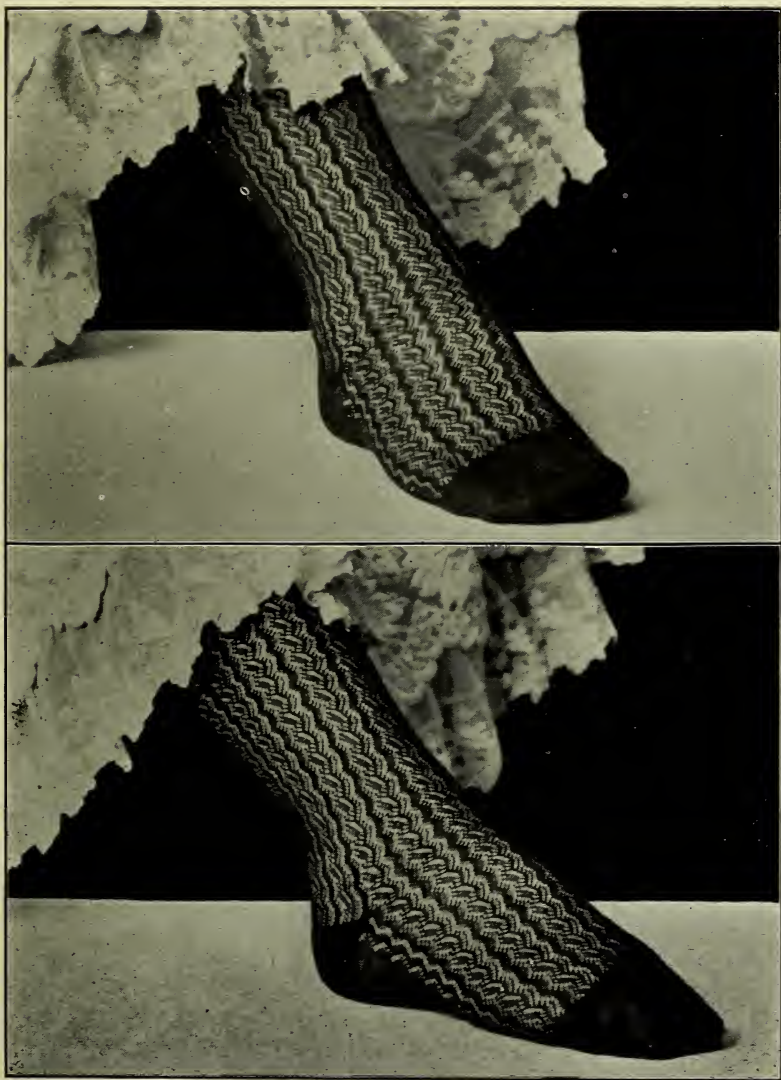


Plate XLIV.—HOW STOCKINGS SHOULD BE FITTED. A. Properly fitted stocking. B. Stocking too short and narrow, pressing upon and deforming the toes.

DRESS

study of the gait and the best methods of walking is now prosecuted by means of prints of the soles of the feet made either by walking in soft clay or by chalking or blackening the soles. The results have favored the straightforward swing from the hip and the frank placing down of the foot, the toes first, not turning it at an angle but letting it fall naturally. In this way, also, many irregularities of gait, indicative either of nervous disease or impending deformity, have been discovered.

CHAPTER XVI

THE SPIRIT AND THE BODY

AFTER all has been said and done, the fact remains that one must first take reckoning of that which makes the body an individual and not a mere "tenement of clay"; namely, the spirit, the soul, the mind or the *ego* — that is, the "I," as the philosophers call it. Whatever name is given to it, it is the living principle by which the individual exists, and in its relation to the body, over which it rules, it has more to do with looks than everything else put together. Cosmetics, care of the person, clothes, will avail nothing if the spirit has written an unpleasant story upon the face.

THE ART OF LOOKING IN THE MIRROR

The greatest beautifier of the face is character. By the complex word character is meant the mental attributes of the person — the woof woven of the intentions, purposes, intellectual attainments, emotions, motives, aspirations, of the individual. If these are lofty and noble, the plainest face takes on a beauty and an interest that are lacking in one whose delicacy of complexion and regularity of features would seem to favor a title to good looks.

THE SPIRIT AND THE BODY

One of the most common acts of our daily life is looking at ourselves in the mirror. So intent is the average person upon the one thing for which he or she has summoned the aid of the mirror that there is no thought given to the actual appearance. The cravat is tied, the bow is knotted, the hair is twisted into its usual place; the hooks are adjusted, the buttons find their holes; fingers do their work, while the eyes look mechanically. It is rare that any one coming within the range of a mirror does not survey himself, although if one were to ask what he had seen, and why he looked, he could not tell even if it were only a minute later. Looking in the glass should be practised as an art. It is not a token of vanity when one regards oneself long and earnestly in its shining surface. "Know thyself" adjured the wise man in ancient days. If one would know the external manifestation of oneself as reflected in the face, the mirror is the friend that will display the knowledge. To know then how the spirit is acting upon your features look at your face critically in the glass. Note the furrows and wrinkles, examine the tell-tale lines. If you are fretful, fault-finding, carping, worrying, anxious, petty, it is written there in undeniable characters. The Ethiopian may not be able to change his skin, or the leopard his spots, but it is quite within the control of each individual to change the lines in the face, provided

THE FOUNTAIN OF YOUTH

the person has perseverance to continue in the course necessary. The exaltation of self is more plainly written on the features than anything else. The so-called selfish lines make the prettiest face plain. To eradicate such, practise self-denial and self-forgetfulness.

EXERCISE OF THE MIND

If your face lacks intellectuality the only way to remedy it is by exercise of the mind. Take up a course of reading and study beyond that which you have hitherto attained. To put it figuratively, cultivate the muscles of the brain as you would cultivate the muscles of the body. It is the action of the brain that will influence the expression. Give scope to the imagination, reproducing by the aid of memory the lovely things in life that you have seen and enjoyed. In the olden time when our grandmothers wished to make themselves and their daughters attractive, they practised what went under the name of "accomplishments." These consisted of needlework, dancing, and the ability to play upon some musical instrument, for in those days home talent did the entertaining. In order to have an all-round development the mind must be cultivated as well as the body. Bodily poise and grace is thus surely attained, and the features become illuminated after a manner that



PLATE XLV.—A. Wrinkling the forehead. B. Removing wrinkles with adhesive plaster. C. Removing wrinkles and supporting a flabby chin with adhesive plaster.

THE SPIRIT AND THE BODY

no cosmetic can give. The study of a modern language is a delightful occupation for exercising the mind, and the knowledge of it will always be found useful. It is well, too, to have a hobby — such as making a collection be it of flowers, or butterflies, or minerals or anything else one takes a fancy to. The collection of spoons and teapots awakens interest, extends observation and widens the scope and powers, just as the collections of marbles and postage stamps teach children. It is a great accomplishment, and adds to one's attractions, to be conversant with one subject to such an extent as to become an authority upon it. The fundamental principle is found in the necessity of every human being doing some work which is of a nature to call forth the best powers, and to exalt him by its absorbing interest out of ruts and the commonplaces of existence.

WRINKLES AND FURROWS

It is the spirit that etches the wrinkles and makes them deep and ineffaceable. Wrinkles are the ripples on the countenance which are the result of disturbing the pools of thought. The right kind of wrinkles are not to be deprecated. A face devoid of wrinkles, after one has passed the age of childhood, is a face without character. This is amply illustrated by the results of retouching a negative.

THE FOUNTAIN OF YOUTH

After all lines are removed, the photograph ceases to be a characteristic likeness.

The unpleasant wrinkles seen in the face are generally due to habits and tricks of which one is entirely unconscious, the grimaces one makes, without realizing, either when talking or thinking. Exposure of the face to wind and weather after a time hardens the skin and takes from it the softness and fairness of early years. Yet it is remarkable how well the skin withstands the exposure to the wear and tear of every-day use, and how few are the lines which may be attributed to this cause. The grimaces with their resultant lines and furrows are the result of a nervous tension which is occasioned by the struggles of life, due either to circumstances against which one has to contend or to the ills of the body itself. Headaches and neuralgias, or endurance of any kind of bodily pain, withers the skin. Sometimes not only the skin shows these disturbances, but the muscles themselves participate in the revolt and begin to twitch, so that the face becomes distorted by spasms. At the very first indication of the twitching of the muscles measures should be taken to relieve the bodily condition which has produced them. Life should be made easier if possible. Tonics and electricity should be used.

Wrinkling the forehead, too, becomes a habit

THE SPIRIT AND THE BODY

with many. It indicates a nervous tension. The horizontal lines extending across the forehead are most disastrous to the appearance. It is very difficult to cure oneself of the habit of wrinkling the forehead, since it takes place involuntarily. The furrows, however, can be lessened and even effaced by the use of the ordinary rubber adhesive plaster obtainable of any druggist. The plaster, the same width as the forehead, should be drawn rather tightly across, avoiding the hair and eyebrows, for it sticks so closely that it pulls upon the hairs when one seeks to remove it. Adhesive plaster is beneficial in two ways: not only does it smooth out the wrinkles, but it softens the skin, thereby assisting greatly to obliterate them.

Steaming the face and afterwards applying some facial cream takes out the finer lines. A skin lacking oil is the one that wrinkles the easiest, and one possessing such should avoid the use of anything which will dry it more, such as harsh alkaline soaps, facial powders and toilet vinegars.

EFFECT OF THE EMOTIONS

I once heard a society belle reproved for laughing too much, for the reason that hilarity would deepen the lines about the mouth and produce crow's-feet around the eyes. It was absurd counsel, for the expressions of joy and gladness give the

THE FOUNTAIN OF YOUTH

countenance a charm that cannot be otherwise obtained. Anger is ruinous in its effects not only on the face, but on the whole body. Anger is a passion that should not be indulged in any more than the display of those emotions which are summed up in the word "temper." The results of anger and temper on the bodily organism are akin to those of illness. It has been found that such emotions cause in the secretions of the body changes of a chemical nature poisonous to the organism. This is demonstrated in gouty people, who become, after a time, irritable and testy because of their disease, and if an ebullition of temper takes place it provokes gouty pain. The effect of these states of mind is shown upon the heart; its action is increased so much that in the aged a fit of anger or temper may cause apoplexy. The appetite and the digestion suffer also, and the nervous system feels the strain. From this it will be seen how necessary it is to cultivate a calm, tranquil and happy spirit if one would not only have good looks but live out half his days. Business cares are responsible for very many of the illnesses which occur. The importance of keeping the mind free from cares cannot be too much dwelt upon. Worry will cause the skin to wither and produce those fine little wrinkles which give a person's face the quality of the skin of a russet apple that has been kept through the winter.



PLA TE XLVI.—A. Removing “crow’s feet” with adhesive plaster. B. Drooping corners of the mouth raised by adhesive plaster. C. Examining to find deposit of fat at corner of mouth. D. Massaging to remove the fat.

THE SPIRIT AND THE BODY

These wrinkles are different from those which come as the result of care and anxiety. Joy and happiness are the great wrinkle banishers, and, if circumstances are such as to throw deep and gloomy shadows in one's life, it is necessary to cultivate a philosophy which brings in the sunshine in spite of everything.

THE LINES ABOUT THE EYES, MOUTH AND CHIN

The massage that is useful for the fine wrinkles about the eyes has already been described. The lines that result from squinting the eyes, which are called the crow's-feet, can be removed by placing pieces of adhesive plaster over them upon retiring, and in the morning, after taking them off, washing the places with cologne or alcohol. The former is preferable.

The lines formed by the deepening of the folds which exist naturally on each side of the mouth, cause the greatest worry. These lines usually become accentuated after a person reaches the age of thirty. If very marked and exaggerated they are exceedingly ugly and sometimes denote a tendency on the part of the owner to undue self-indulgence. They are due to a thickening of the muscles and fat of the cheek, causing the flesh to fold over the portion underneath, which in its turn has become thinned. It is difficult to describe this

THE FOUNTAIN OF YOUTH

state exactly, but it is easy for any one to see it for herself. Placing the thumb of the hand opposite to the side to be examined, in the mouth so as to grasp the fold between it and the forefinger outside, one will feel the ridge that has been described. The way to get rid of it is to massage it systematically. This is best done by placing within the mouth the forefinger of the hand of the same side and with the thumb outside rubbing it and smoothing it so as to equalize the thickness of the tissues, making the upward stroke the heaviest. For the drooping corners of the mouth, and also as a further means of reducing the wrinkles just described, use adhesive plaster, applying it so as to lift up the corners as much as possible.

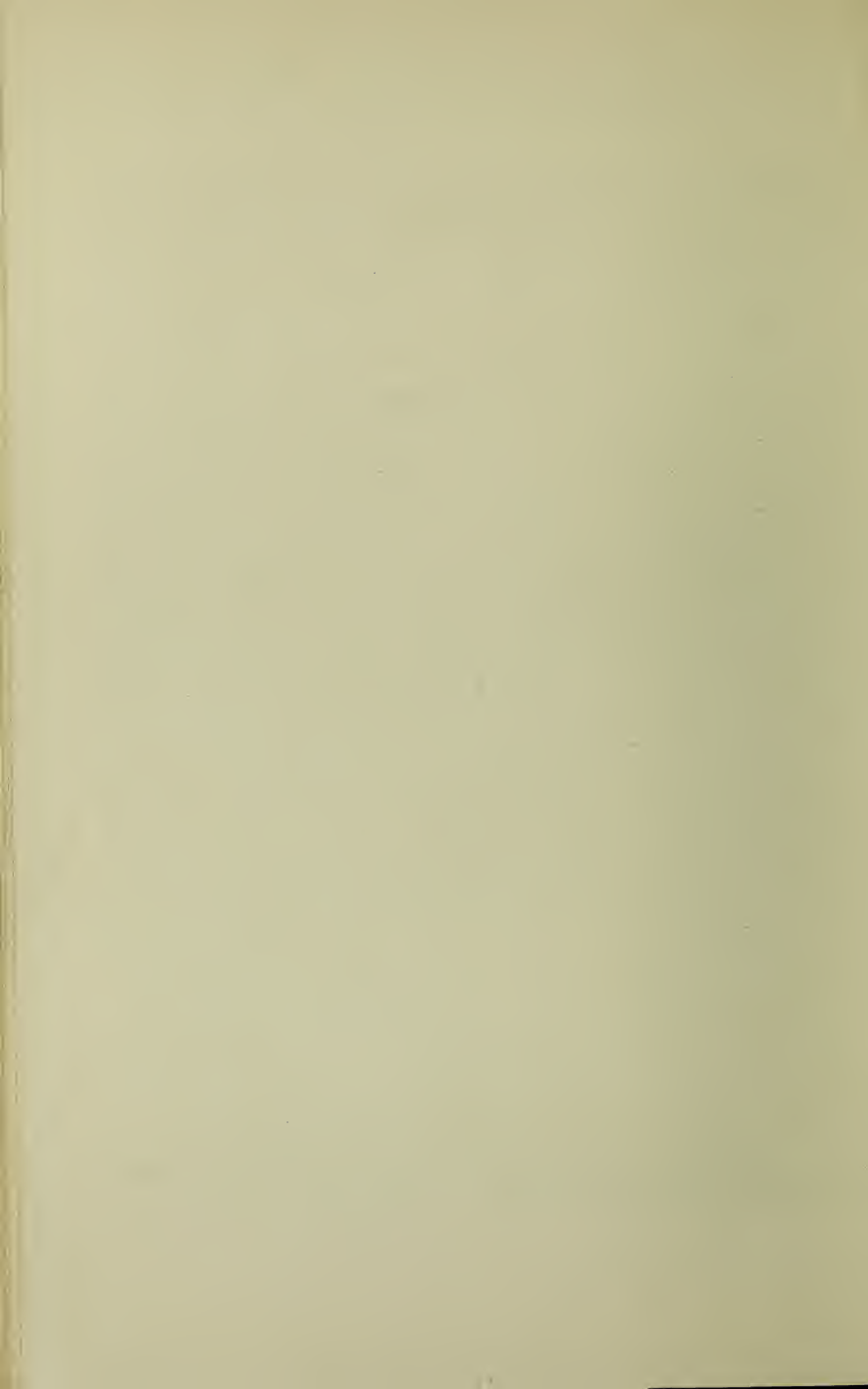
The wrinkles which form under the chin are especially noticeable when a low corsage is worn. Adhesive-plaster bandage applied as tightly as can be to support the tissues well, will remove these and also prevent the sagging of the chin which comes with years.

DEPRESSION OF SPIRIT

Care, anxiety and sorrow will not only occasion wrinkles, but they weaken the whole system. When one is feeling depressed from mental or physical causes the carriage is the reverse of that of the happy, prosperous person, who, with head erect, lungs in-



***P**PLATE XLVII.—CORRECTING ROUND SHOULDERS AND DEVELOPING THE CHEST. A. Front view. B. Back view.*



THE SPIRIT AND THE BODY

flated and chest expanded, the shoulders thrown back, carries herself jauntily. The old-fashioned description of the young woman disappointed in love who "goes into a decline" is very accurate. The reason that the expression of mortal heart wounds takes the form of consumption is found in this attitude of depression. The shoulders curve forward, the lungs are deprived of the space for expansion and become enfeebled, and so furnish a fertile soil for the germination of diseases such as consumption and pneumonia. It is the duty of every one who has round shoulders from any cause to remedy them. This is not difficult. Persist in exercises for chest expansion night and morning. Take a cane or a broom handle and place it under the arms, holding it in position by the hands and in such a manner as to expand the chest to the utmost and at the same time to bring the shoulder-blades into position, so they are applied as closely as possible to the underlying structures. Do this as often as possible when sitting or reading or walking, and after a time the habit of erect carriage will be formed and the stoop in the shoulders will be corrected.

Round shoulders, while sometimes the result of depression of mind and body, occur from the bad postures which children take in studying and also from curvature of the spine, which is acquired in

THE FOUNTAIN OF YOUTH

various ways. For such cases braces are made especially, although the tendency of the day is to cure these by means of exercises rather than by external appliances. Shoulder-braces may be made consisting of two pieces of stout cloth fashioned with armholes and cut so as to fit the back with the upper edge straight and the lower edge slanting down from the armholes to a length to cover well the shoulder-blades. Whalebones and eyelet holes for the lacings should finish the back of this appliance, so that they can be laced together more and more closely as the shoulders become straighter.

After carefully examining many braces for the ordinary stooping shoulders I found the one that answered the purpose the best and was the most comfortable was what is called the military brace. It is made for both men and women as well as children and comes in several sizes. It holds one up so well and so firmly that it is a pleasure to wear it, instead of a penance, as is the case with some other appliances. It has been asked if the continued use of such devices will not tend to render one dependent upon them instead of making the muscles do their work. They are beneficial in training one at first to the habit of correct posture. Exercises such as have been described in the chapter on "Bodily Symmetry" should also be used systematically.



*PLATE XLVIII.—A. Natural position for sleeping. B. Wrinkles formed
by pushing up the check while sleeping.*



THE SPIRIT AND THE BODY

TENSION AND REPOSE

The Delsarte system, which had such a vogue some years ago, gave instruction in regard to the relaxation of the various parts of the body. It was in this that its chief value lay. The systems of physical culture which have followed it have one and all embraced this idea. The bodily tension is much greater in some than in others. It is an unnecessary expenditure of nerve-power. To test how great is your bodily tension let out your breath, let your arms hang loose, and, as some one has expressed it, "devitalize" yourself as far as possible. This relaxing process gives repose to the body, and some who have been victims of insomnia have been able to obtain sleep by it. The process is to begin rapidly, flexing the joints first of the fingers, then turning the wrists, then bending the arms at the elbow joint, and then swinging them at the shoulder, and so on through the various sets of joints of trunk and lower extremities. The point is to do them easily, quickly and mechanically a certain number of times. Those who have great cares and anxieties and have to work hard and nerve themselves up to work have this tension unconsciously, which racks and wears them without their realizing it until too late, when the result is a general break-down or nervous prostration. Change of scene and occupation is more necessary to-day than in the olden time, since

THE FOUNTAIN OF YOUTH

the demands upon time and brain have grown so much more exacting.

The methods of resting in lying down are often faulty. The correct position in bed for sleeping restfully and quietly is to have the head low. The pillow should be a thin one. One should sleep on the right side, as that leaves the heart more free, and should lie easily, the knees drawn up more or less as is comfortable. The whole tendency is to bend the body and the extremities—to roll up into a ball. This is natural, since it is the position that is taken during pre-natal life. Sleeping on the back, especially if the head is high, is apt to give uneasy slumbers and is conducive to nightmares. It is the practice of many while sleeping to place the hand or fist under the cheek, and while doing so to wrinkle the face. Such wrinkles often become permanent. Perfect sleep is necessary for good looks.

INDEX

- ABDOMEN**, the, reduction of, 142-144; its position in correct standing, 162
Abdominal bandages, 177
Abrasion, treatment of, 40
"Accomplishments," 184
Acne, 37
Adhesive plaster, use of, 187, 189, 190
Air, as an antiseptic, 29; as a cosmetic, 39; importance of, to the human body, 134
Albinos, 97
Albuminates, 151
Alcahest, 4
Alchemy, 1 et seq.
Alcohol, use of, 37, 39; for the hair 102, 103; as an antiseptic, 127, 177.
Anæsthetics and analgætics, discoveries of, 13
Anger, effect of, on the body, 188
Antiseptics, use of, 18; light and air as, 29; for the breath, 70; for the teeth, 76; use of, by hairdressers, 99; alcohol, 127, 177
Anxiety, influence of, on the face, 26; a cause of bad breath, 71; a cause of wrinkles, 183
Apoplexy, anger a cause of, 188
Appetite, misdirected, 135, 146, 147; effect of the emotions on, 188
Appetites, indulgence and control of the, 20
Arms, the, care of, 83, 94-96; destruction of hair under, 90; massage of, 94
Artificiality, the error of, 123, 124
Astringent lotions and ointments, 38, 39, 46
Astrology, 1, 8
Athletics. See **EXERCISES**
Automobile glasses, 54
Automobiling, 165
BACK, development of its muscles, 139
Baldness, cause of, 103
Balzac's "Peau de Chagrin," 20
Banting system, 150-154
Bar-bells, use of, 168, 169
Bath-brush, use of, 95
Bath cabinets, 84
Bathing, influence of, on the skin, 83; necessity of care in, 91; effect of, on the arms, 94, 95; surf, 167
Bathing-suits, 95
Baths, importance of, ix; different kinds of, 83-85; as a means of flesh reduction, 156, 157
Beauty, power of, vii; causes of, viii; the right to enhance, 123
Bed, correct position in, 194
Bicycling, 165, 166, 172
Biology, growth of, 15
Birthmarks, 34, 35
Blackheads, 29, 30, 33, 36, 37, 39, 41
Bleaching the hair, 125
Blondes, 27, 97
Blood, oxygenation of the, 65
Blood-letting, abolition of, 18, 19
Blood-vessels, of the skin, 27; influence of, on color, 27
Blotches, facial, 38
Bodily symmetry, 134-144

INDEX

- Bodily tension, 193, 194
 Body, the, care of, viii; effect of desire upon, 20; spirit and, 182-194
 Braces, 192
 Brain, the, its influence on beauty, viii; victor over physical force, 16; action of, 21; control of, over the muscles, 23; lack of nourishment of, 65; supply of blood to, 174; influence on the expression, 184; cultivation of, 184
 Bran, use of, in bathing, 84, 85
 Bread, use of, 136, 138, 146, 151, 153-155
 Breast, development of the, 139, 140
 Breath, infectious, 70; bad, 70, 71
 Breathing, importance of correct, 81
 Breathing exercises, 93
 Breeding, the science of, 10
 Brow, wrinkling the, 24, 25
 Brunettes, 33, 48, 97
 Bunions, 119-121, 179, 180
 Bust, development and reduction of the, 139, 140
 Butter, use of, 136, 138, 146, 151, 153

CALISTHENICS, 164
 Callouses, 120
 Camphor ice, 68
 Candy, use of, 137, 138
 Capillaries, the, use of electricity on, 27; influence on the complexion, 27, 33, 39; nourishment of the skin by, 83; stimulation of, 100, 103; interference with, 125
 Carbo-hydrates, 151
 Catarrh, nasal, 65, 66; a cause of bad breath, 70
 Chapped hands and lips, 68, 112
 Character, the greatest beautifier of the face, 182; written in the face, 185
 Cheeks, flabby, 24; influence of fat on the, 26; rosy, 27; washing the, 31; lack of color in, 41; massage of, 41, 42; superfluous hairs on, 87; lines on, 189
 Cheerful spirit, the best cosmetic, 133
 Chemistry, development of, 1, 8, 9
 Chest, the, skin of, 91; expansion of, 93, 191. See also BUST
 Childhood, 11
 Children, decrease in mortality among, 12; facial distortion in, 25; rosiness of, 33; removal of moles and birthmarks from, 34; to be taught mastication, 34; care of their ears, 55-57; effects of colds in, 82; faulty postures of, in studying, 191
 Chin, a protruding, 26; a receding, 26, 87; fat on the, 26, 42, 86; washing and massaging the, 31, 42, 43, 86; reduction of the redundant, 42, 85-87; exercises for, 42, 43; the baggy, 86; superfluous hairs on, 87; effect of tight neckwear on, 174; lines surrounding, 189, 190
 Circulation, its influence on beauty, viii; affected by dirt, 28; effects of imperfect, on the complexion, 34; defective, 38, 39; effects of defective, on the eyes, 48; effect of defective, on the lips, 68; stimulation of, by singing, 81, 93, 94; increased by massage, 92; improvement of, 94, 139, 154, 163; defective, in the scalp, 103; interference with, 125; effect of garters on, 177
 Cleanliness, importance of, 13, 37, 99, 111, 119; in surgery, 13, 112; of the hair, 97 et seq.
 Cleft palate, 69
 Coal, influence of soft, on the complexion, 28
 Cod-liver oil, use of, 136

INDEX

- Cold, theories of, 9; avoidance of, 101, 102
 Cold cream, use of, 36, 38-40, 68, 96
 Colds, injuries wrought by, 81; avoidance of, 175
 Cold sores, 69
 Collars, effects of tight, 42, 91, 174; use of high, 128, 129
 Collecting, 185
 Combs, sterilization of, 99
 Comedone extractor, 37
 Comedones. See BLACKHEADS
 Complexion, influence of the capillaries on the, 27, 33; influence of dirt on the, 28; a muddy, 28, 29, 38, 41; an unwholesome, 33; importance of a good, 33; effects of various complaints on, 34
 Complexion-brush, use of, 41, 95
 Complexions, men's, 28; ruined by sponges and face cloths, 28
 Constipation, effects of, 34, 63, 70
 Consumption, depression a cause of, 191
 Contagion, propagated by the breath, 70; spread by unclean hands, 112
 Conversation, handicapped by grimaces, 25
 Corns, 119-121, 178
 Corpulency, its causes and treatment, 135-138, 140, 142, 145-158
 Corsets, 176, 177
 Cosmetics, water and electricity as, 27, 63; the science of, 122; use and abuse of, 122-133; the best, 133
 Countenance, effect of the emotions on the, 187-189
 Cream, use of, 136, 138
 Crows'-feet, 187, 189
 Curling tongs and pins, 110
 Curl-papers, 110
 DANCING, 163, 164, 184
 Dandruff, causes and removal of, 97, 100
 Deaf, trials of the, 59
 Death, dread of, 15; the right preparation for, 21
 "Decline," 191
 Deformities, 65
 Delsarte system, 193
 Dental floss, use of, 75
 Dentifrices, 72, 73
 Dentistry. See TEETH
 Depilatories, 90, 91, 95
 Depression, effect of, on the body, 190
 Deprivation, influence of, on the face, 26
 Dermatology, 34, 35
 Desire, its effect upon the body, 20
 Desires, changes in, 11; control of, by the mind, 20
 Devitalization, 193
 Diet, matters of, 135-138, 146-155
 Digestion, its influence on beauty, viii; promoted by alcohol, 148; effects of the emotions on, 188
 Dimples, 25, 26
 Dirt, effects of, 28, 29
 Disease, the lessening of, 12
 Dish-washing, protection of the hands in, 112
 Disinfectant, alcohol as a, 103; toilet vinegars, 128
 Distortion of features, 25
 Douche, the, as a means of flesh-reduction, 156, 157
 Draughts, avoidance of, 82
 Drawers, women's, 175, 176
 Dress, 170 et seq.; style in, 170; hygiene in, 171-173; frivolity and fads in, 171-174
 Drinking, influence of, on weight, 148
 Driving, 165
 Drugs, use of, 7
 Dumb-bells, use of, 168
 Dust, influence of, on the complexion, 28; injuries caused by, 82

INDEX

- EARS, care, diseases, and treatment of the, 55 et seq.
- Earth, the rejuvenating power of the, 17
- Ear-trumpets, 60, 61
- Ear-wax, 58, 59
- Eating, hygienic, 34; habits of, 146, 147
- Eau de cologne, use of, 37, 39, 46
- Ebstein's method of reducing flesh, 152-154
- Eggs, use of, 136, 138, 146, 151, 153, 155
- Electricity, uses of, 27, 63, 88, 186; of the body, 176
- Electric treatments, 34, 35
- Elixir of life, the search for the, 3 et seq.
- Elocution lessons, value of, 94
- Emaciation, a symptom of disease, 145
- Emotions, effects of the, 26, 182, 187-189
- Entertainments, 184
- Epilating forceps, use of, 51, 87
- Erect carriage, 191
- Eruptions, caused by dirt, 28
- Evening dress, discolorations from wearing, 95
- Exercise, importance of, 134, 138, 139, 141-144, 147, 149, 154, 156, 159-169
- Exercises, in the treatment of fat, 26; to reduce the chin, 86; for developing the neck, 92; for the arms, 94; of the mind, 184, 185
- Exposure to weather, 186
- Expression, 23; anxious, 24; influence of the brain on, 184
- Eyeballs, massage of the, 49
- Eyebrows, the, massage of, 30, 41; modification of, 44; care of, 49, 51
- Eye-cup, use of the, 47
- Eye-glasses, 52
- Eyelashes, the, modification of, 44; diseases and care of, 49, 50
- Eyelids, the, massage of, 30; puffiness of, 48; inflammation of, 45-47, 49
- Eyes, expressionless, 24; squinting, 24; fat in the sockets of the, 26; massage of the, 30, 41; their care, treatment, and diseases, 44 et seq.; inflammation of the, 45-47; effect of late hours on the, 46; puffiness underneath the, 46, 48; black circles under the, 48; protection of the, 53, 54; lines surrounding the, 189, 190
- Eyesight, defective, 49, 52-54
- Eye-strain, 44 et seq., 180
- Eyewashes, 46
- FACE, value of an attractive, vii; bodily vigor reflected in the, viii; its configuration, 22; expression of the, 23; muscular tension, 23, 24; relaxation of the muscles of the, 24; beauty of, 26; influence of the emotions on the, 26; influence of fat on the, 26; a round and rosy, 26; steaming the, 27; color, 27; washing the, 28-32, 36, 41; massage of the, 27, 29-32, 38, 42; effects of exposure of the, 33; effects of various complaints on the, 34; sagging of the, 42; sensitiveness of its skin, 89; use of "rhusma" on the, 90; the greatest beautifier of the, 182; character in a, 185; spasms of the, 186. See also BLACKHEADS; COMPLEXION; FRECKLES; LIVER SPOTS; MOTHS PATCHES; PIMPLES; SUNBURN
- Face-cloths, dangers of, 28; care of, 29
- Face-paints, 123-125
- Face-powder, use of, 36, 38, 40, 96, 129, 187
- Facial blemishes, 34 et seq.
- Facial cream, use of, 38-40, 187
- Facial distortion in children, 25

INDEX

- Facial eruptions, caused by dirt, 28, 29
 Facial surgery, 65, 70
 Facial treatment, 38 et seq.
 Fads and frivolity in women's dress, 171-174
 Fancy work, a cause of eye-strain, 44
 Far-sightedness, 49
 Fashion in gait, 180
 Fashions, 171 et seq.
 Fat, increase or diminution of, 22, 26, 134 et seq.; influence of, on the face, 26; treatment of, by exercises and massage, 27; improper distribution of, 135; a tendency toward disease, 145
 Fatigue, effect of, on the eyes, 48
 Fatty degeneration, 145, 146
 Fault-finding, a cause of wrinkles, 183
 Features, the, 22; control of, 24; distortions of, 24, 25; illumination of the, 184
 Feeling, the sense of, 111
 Feet, care of the, 118-121
 Fencing, 169
 Finger-nails, care of the, 112-118, 129; importance of cleanliness of the, 112
 First aid to the injured, 18
 Flannel skirts, 175
 Florida, search for the Fountain of Youth in, 16
 Footbaths, 119
 Forehead, wrinkling of the, 24, 25, 52, 186, 187; massage of the, 30, 41
 Fountain of Youth, the search for the, vii, 1 et seq., 16
 Freckles, treatment of, 35; avoidance of, 96
 Fretfulness, a cause of wrinkles, 183
 Frivolity and fads, in women's dress, 171-174
 "Fronts," 108, 109
 Frowning, 24
 Furnace-heated houses, 176
 Furrows, causes and treatment of, 183, 185-190, 194
 GAIT, fashion in, 180; irregularities of, 181
 Gardening, protection of the hands in, 112
 Garters, 177, 178
 Gases, old theory concerning, 8
 Gestation, period of, 11
 Gladness, effect of, on the countenance, 187, 188
 Glands of the skin, 36, 40
 Gloves, use of, 112, 113, 174
 Glycerine, use of, 39, 40, 129
 Gold, the thirst and search for, 2 et seq.; attempts to transmute base metals into, 2; uses of, in medicine, 4, 6
 Golf, 164, 172
 Good looks, how to obtain, vii; the secret of, 182, 188, 189
 Gout, causes and effects of, 188
 Grace, exercises for, 141-144, 160-169; cultivation of, 184
 Gray hair, care of, 108-110; modern attitude toward, 125
 Grecian bend, the, 180
 Grimaces, 24, 25, 67; a cause of wrinkles, 186
 Gums, care of the, 74
 Gymnasium work and apparatus, 139, 141-144, 160, 168, 169
 HABITS, formation of, 24, 25, 34; breaking of, 25; a cause of wrinkles, 186
 Hair, on the face, 39, 40; removal of superfluous, 87-91; destruction of, under the arms, 90; on the arms, 95; physiology and care of the, 97-110; falling out of, 103; stimulation of its growth, 103-106; care of gray, 108-110; bleaching the, 125; effect of hats on the, 173, 174
 Hairbrushes, care of, 99, 106
 Hairdressers, necessity for aseptis by, 99
 Hair-dyes, 109, 125, 126

INDEX

- Hair-tonics, 103, 104
 Handkerchief, use of the, 62
 Hands, relation of, to the mental powers, 111; care of the, 111-118
 Hangnails, 114, 117
 Happiness, a foe to wrinkles, 189
 Harelip, 69
 Harems, removal of superfluous hair in Eastern, 90
 Hats, monstrosities in, 173; choice and construction of, 173; effect of, on the hair, 173, 174
 Headaches, causes of, 52, 180; effect of, on the skin, 186
 Health, maintenance of, ix; search for the secrets of, 4; the public, 13; importance of hygiene to, 20; effect of business cares on, 188
 Heart, the, its influence on beauty, viii; importance of, 20; an involuntary muscle, 23; fatty degeneration of, 146; necessity of examination of, before athletics, 160; exercises for, 160, 161; effect of the emotions on, 188; during sleep, 194
 Heat, theories of, 9
 Heels of shoes, 178-180
 Herbs, use of, in medicine, 7, 10
 "Hercules," the medicine called, 4
 Heredity, 146, 147
 High heels, 178-180
 Hill-climbing, 154, 161
 Hips, reduction of the, 142-144
 Hobbies, 185
 Horseback-riding, 165
 Hot water, as a beverage, 148, 149
 Human body, its symmetry, measurements, weight, care, etc., 134-144
 Human knowledge, expansion of, 14 et seq.
 Hydrotherapy, 5
 Hygiene, importance of, vii, 20; neglect of, viii, 19; study of, 13; mental, 20; in dress, 171-173
 IMAGINATION, cultivation of the, 184
 Indian clubs, use of, 168
 Indigestion, effects of, 34, 63, 69, 70; due to eye troubles, 52
 Inebriety, use of gold to cure, 6
 Infancy, 11
 Infection, spread by unclean hands, 112
 Infirmities, concealment of, 61
 Ingrowing toenails, 119
 Insomnia, 52, 193
 Intellect, 182, 184
 JAWS, setting of the, 24; exercises of the, 43; effect of their position, on the chin, 87
 Joy, effect of, on the countenance, 187, 188
 KID GLOVES, 174
 Kidneys, effect of diseases of the, on the eyes, 48
 "Know thyself," 183
 LAIT VIRGINAL, 131
 Languages, study of, 185
 Laryngoscope, invention of the, 79
 Larynx, the, 78, 81
 Late hours, effect of, on the eyes, 46
 Laughing, 187; distortion in, 25
 Legitimacy laws, 11
 Lemons, use of, 94, 95, 128, 129
 Life, desire for long, 3 et seq.; development of the science of, 9, 10; love of, 10; span of, 10 et seq.; the secret of long, 20; regulation of, 21
 Light, as an antiseptic, 29; as a cosmetic, 39; direction of, on work, 45; importance of, to the human body, 134
 Lips, pouting, 25; protruding, 25; distortion of the, 67; chewing the, 67, 68; chapped, 68; colorless, 68; cracked, 68; dry, 68;

INDEX

- care of the, 69; effect of cold baths on the, 84; superfluous hairs on the, 87, 89; sensitiveness of the, 89
- Liver, effect of diseases of the, on the eyes, 48; stimulation of the, 156
- Liver spots, 35
- Longevity, the desire for, 3 et seq.; the secret of, 20
- Lorgnettes, 53
- Lotions, toilet, 129-131
- Low corsage, chin lines accentuated by a, 190
- Lungs, diseased, a cause of bad breath, 70, 71; their function, 81; increasing the capacity of the, 93; exercises for the, 161, 162; depression a cause of disease of the, 191
- MAGIC, 1, 8
- "Magic Skin, The," 20
- "Making-up," 124
- Malnutrition, 146
- Malt liquors, effects of, 148
- Man, the life history of, 10 et seq.
- Manicuring, 113-118
- Masks, use of, 38
- Massage, importance of, ix; influence in the treatment of fat, 27; self, 41, 42; beneficial for the skin, 83; after bathing, 85; increase of the circulation by, 92; as a means of flesh-reduction, 142-144, 156, 157
- Mastication, importance of, 34
- Materia medica, primitive, 3 et seq.
- Maturity, 11, 16
- Medicinal baths, 83
- Medicinal springs, 7
- Medicine, history of, and progress in, 3 et seq., 9, 13, 16; early books on, 16
- Medicines, as used for reduction of flesh, 157, 158
- Memory, 184
- Mental attributes, 182
- Mental hygiene, 20
- Mentality, the power of, 17
- Mental powers, relation of the hands to the, 111
- Mercury, use of, in medicine, 4, 6, 7
- Metals, use of, in medicine, 7; old theories concerning, 8
- Metchnikoff, Iliya, biological work of, 15
- Microscope, revelations of the, 10
- Milk, use of, 136, 138, 146, 148, 149, 154
- Mind, power of the, 16, 17; control of appetites by the, 20; exercise of the, 184, 185; importance of keeping it free from care, 188
- Mineral waters, use of, 148, 158
- Mirror, the art of looking in the, 182-184
- Mitchell, S. Weir, his cure for obesity, 148, 149
- Moles, 34, 35
- Mortality, lessening of, 12
- Moth patches, 35, 39, 130
- Mouth, the, distortions of, 24-26; an indication of character, 26; control of, 26, 67, 87; massage of the, 31; the feature of expression, 67; physiology, care, diseases, and treatment of, 67 et seq.; lines surrounding, 189, 190
- "Mouth-breathers," 65
- Mouth-washes, 70, 76
- Muscle, increase and reduction of, 134 et seq.
- Muscles, their influence on beauty, viii; functions of, 22; control of the, 22 et seq.; influence of thought on the, 22, 23; control of, relaxed during sleep, 23; voluntary and involuntary, 23; control of the brain over, 23; tension and relaxation of, 23, 24; stretching the, 42, 43; of the eyes, 45; of the chin, 86; of the neck, 91;

INDEX

- of the ribs, 92 ; of the arms, 94 ;
development of the, 139, 141-
143, 156, 159-169 ; twitching of
the, 186
- Music, 184
- Musk, use of, 71, 127
- Mythology, the wisdom of, 17
- NASAL VOICE**, 78
- Natural philosophy, revolutions in, 9
- Nature, the immutable laws of, 16,
21
- Near-sightedness, 49
- Neck, the, washing, 31, 175 ; care
of, 83, 91, 92 ; fat on, 91, 92 ;
massage of, 91, 92 ; a scrawny,
92 ; coverings of, 175
- Neckbands, dangers of tight, 174
- Needlework, 184
- Nerve-power, waste of, 193
- Nerves, their influence on beauty,
viii ; influence over the muscles,
23 ; tension of, 24 ; effects of the
emotions on the, 188
- Nervousness, as a cause of bad
breath, 71
- Nervous prostration, 193
- Nervous tension, 186-189, 193
- Nervous troubles, due to defective
vision, 52
- Neuralgia, effect of, on the skin,
186
- Nightmare, 194
- Nose, the, massage of, 30, 63, 64 ;
tendency of, to blackheads, 30 ;
physiology, diseases and treat-
ment of, 62-66 ; disease of, a
cause of bad breath, 70, 71
- Nose-clip, use of the, 64
- Nourishment, importance of, 134
- OBESITY**, 135-138, 140, 142, 145-
158
- Odor, personal, 71
- Oertel system of reducing corpu-
lency, 150, 153-155
- Oil, lack of, in the skin, 187
- Oils, use of, 131, 132, 136
- Ointments, use of, 39, 68, 131, 132
- Old age, 11 ; the cult of, 13, 14 ;
causes of, 15
- Opium, use of, in medicine, 7
- Otophone, 61
- Outdoor sports, discolorations of
skin caused by, 95
- Overdrinking, 34, 62
- Overeating, 34, 62 ; a cause of
obesity, 155
- Oxygenation of the blood, 65
- PAIN**, effect of, on the skin, 186
- Pashkis, Dr., on the use of cos-
metics, 122
- Passions, indulgence of the, 20
- "Peau de Chagrin, Le," 20
- Perfumes, use of, 40, 71, 127
- Peroxide of hydrogen, use of, 126
- Personal appearance, neglect of,
viii
- Perspiration, use of powder for, 40 ;
effect of, on gray hair, 109 ; of
the feet, 119 ; treatment of, 129
- Petticoats, 175
- Pettiness, a cause of wrinkles, 183
- Philosopher's stone, the search for
the, 2
- Philosophy, early, 1 ; revolutions
in, 9
- Phlebotomy, abolition of, 18, 19
- Physical culture, ix, 139 et seq.,
193
- Physical force, the decline of, 16
- Physique, value of a fine, vii
- Pillows, 194
- Pimples, cause and treatment, 29,
36, 37, 39, 41 ; disfigurement of,
33 ; on the neck, 91
- Plants, development of, 11
- Plunge-baths, 83
- Pneumonia, depression a cause of,
191
- Poise, exercises for, 141, 142, 161-
164, 168, 169 ; cultivation of, 184

INDEX

- Ponce de Leon, Juan, search by, for the Fountain of Youth, 16
 Port-wine marks, 34
 Pouting, 25
 Powders, toilet, 129-131
 Prague, hygienic ordinance concerning women's skirts in, 172
 Progress, modern, 14 et seq.
 Public health, improvements in, 12, 13
- RADIUM, discovery of, 9
 Rainy-day costumes, 172
 Reading, 184
 Relaxation, 193, 194
 Repose and tension, 193, 194
 "Rhusma," 91
 Ribs, muscles of the, 92
 Rice-powder, 40, 129, 130
 Riches, the thirst for, 2, 20
 Roentgen ray, discovery of the, 9
 "Rosa Anglica," the, 16
 Rouge, 123, 124
 Round shoulders, 191, 192
 Rowing, 167, 168
 Rubber gloves, 112
 Rubber plaster, 187
 Running, 161, 163
- SALLOWNESS, 39
 Salves, 131, 132
 Scalp, the, care of, 97 et seq., 106-108. See also HAIR; SHAMPOO
 Science, the dawn of, 3; growth of, 14 et seq.
 Schweninger system of reducing flesh, 148, 153-156
 Scissors, sterilization of, 99
 Scowling, 24
 Scrawny neck, 92
 Scrubbing, protection of the hands in, 112
 Sea-bathing, 167
 Sebaceous follicles, 36, 38, 40, 64
 Sée, Germain, on obesity, 148
 Self-denial, 184
 Self-exaltation, recorded in the face, 184
 Self-forgetfulness, 184
 Self-help, viii
 Self-indulgence, marks of, 189
 Selfish lines in the face, 184
 Self-massage, 41, 42
 Senility, causes of, 15
 Senses, the, 111
 "Seven Golden Chapters," the, 16
 Shampoo, its uses and methods, 97 et seq.
 Shaving-soaps, use of, 28
 Shoes, 120, 121, 177-181
 Shoulder-braces, 192
 Shoulders, development of the, 139; round, 191, 192
 Silk, for women's underwear, 175, 176
 Singeing the hair, 104, 105
 Singing, stimulation of the circulation by, 81, 93
 Skim milk, use of, 149
 Skin, the, changing the color or texture of, 22; of the aged, 27; care of, 27; blood-vessels of, 27; effect of dirt on, 28; use of hot water on, 28; importance of a good, 33; color of, 33; causes of blemishes on, 34; spots on, 35; oily follicles of, 36, 38, 40; glands of, 36, 40; treatment of that of the face, 38; muddy, 38, 39, 41; treatment of thick and thin, 38, 40; treatment of relaxation of, 48; to toughen, 63; its condition an index of state of health, 83; influence of bathing on, 83, 84; renewal of, 84, 85; of the chest, 91; of the neck, 91; of the throat, 91; of the arms, 94-96; effects of exposure on, 95; action of toilet powders on, 129; effect of pain and weather on, 186; lack of oil in, 187; effect of emotions on, 187-189
 Skin-bleach, 130

INDEX

- Skin-food, 131
 Skirts, uncleanness and dangers of women's, 172; attachment of waists to, 172, 173
 Skull, massage of the base of the, 42
 Sleep, 23, 193, 194
 Sleeves, dangers of tight, 174
 Smiles, beauty of, 25
 Smiling, distortion in, 25
 Smoke, injuries caused by, 82
 Soap, use and choice of, 27, 28, 71-73, 95, 113, 187
 Social position, the struggle for, 20
 Sore throat, causes of, 81; a cause of bad breath, 70
 Sorrow, influence of, on the face, 26
 Spasms, facial, 186
 Speaking-trumpet for the deaf, 60
 Spectacles, use of, 52
 Spinal column, massage of the muscles of the, 42
 Spinal percussion, 156
 Spinal troubles, high heels as a cause of, 180
 Spine, curvature of the, 191, 192
 Spirit, the, and the body, 182-194; its workings a cause of wrinkles and furrows, 185
 Sponge-baths, 83
 Sponges, dangers of, 28; care of, 29
 Sports. See their various names
 Squinting, 24
 Stair-climbing, 154, 161
 Standing, 161-163
 Steaming, 27, 38, 39, 41, 187
 Stockings, 177, 178
 Stocks, drawbacks of tight, 42
 Stomach, disordered, a cause of bad breath, 70
 Stooping shoulders, 191, 192
 Straight-front corset, 177
 Strength, the sources of, 17
 Study, 184, 185; faulty postures in, 191
 Styes, 50
 Style in dress, 170
 Sugar, use of, 137, 138, 148, 149, 151-153
 Suicide, restraint of, 10
 Sulphur, use of, 39, 131
 Sunburn, treatment of, 36
 Sunlight, as an antiseptic, 29
 Superstition, in medicine, 3, 8
 Surf-bathing, 167
 Surgery, modern, 13; facial, 65, 70; cleanliness in, 112
 Sweat-glands, care of the, 84
 Swedish movements, 149, 156
 Sweeping, protection of the hands in, 112
 Sweets, use of, 137, 138, 146
 Swimming, 166, 167
 Symmetry, bodily, 134-14
 TAILOR GOWNS, 172
 Talcum powders, use of, 40
 Taste in dress, 171
 Tastes, changes in, 11
 Tea, use of, 148, 152-155
 Teeth, position of, 26; decayed, a cause of bad breath, 70; care of the, 72-77; advantages of good, 72, 76, 77
 Temper, effect of, on the body, 188
 Tennis, 168
 Tension and repose, 193, 194
 Thigh-flexion, 156
 Thinness, not disease, 145
 Thought, the force of, 6; influence of, on the muscles, 22, 23
 Throat, the, skin of, 91; to whiten, 94; washing, 175
 Thyroidine, 157
 Tight-lacing, 176, 177
 Time, the irresistible hand of, 16
 Toenails, care of the, 118, 119; ingrowing, 119
 Toes, the, effect of high heels on, 179, 181; turning in or out of, 180; troubles with the, 180, 181
 Toilet, importance of the rites of the, 19

INDEX

- Toilet preparations, 128-131, 187
 Tonic baths, 83
 Tonics, use of, 186
 Tonsils, diseased, a cause of bad breath, 70
 Toothbrushes, 73-75
 Tooth-washes, 72, 73
 Touch, the sense of, 111
 Towels, use and choice of, 32, 113
 Travelling, effect on the eyes caused by reading while, 45
 Trolley-car riding, 165
 Trunk, development of the muscles of the, 141, 142
 Turkish baths, 84
 Tusks, 77
 Tweezers, use of, 87
 Twilight, use of the eyes in, 45
 Twitching muscles, 186
- UNDERWEAR, WOMEN'S, 175
- VANITY, ill-advised, 26; looking in the mirror, 182-184
 Vapor baths, as a means of flesh-reduction, 156
 Vegetables, use of, 137, 138, 148, 152-155
 Vocal cords, the, 78-82
 Voice, care of the, 78-82, 93, 94; importance of a pleasing, 82, 94; cultivation of the, 93
- WAIST, lengthening the, 141
 Walking, 161, 163, 165, 166
- War, the disappearance of, 17; the carnage of modern, 18; decrease of mortality in, 18
 Water, as a cosmetic, 27; use of hot, 28, 38, 96; use of cold, 38; use of distilled, 40; as a beverage, 138, 148, 149, 152, 155
 Weight, of the human body, 135-138; increase or reduction of, see BANTING; CORPULENCY; OBESITY
 Wigs, 108, 109, 126
 Will, power of, over the muscles, 23
 Will power, expressed in the mouth, 67
 Wine, use of, 148, 152, 153, 155
 Women, age of, 14; sensitiveness of, 64; weight of, 135; symmetry or its lack in, 135 et seq.
 Women's underwear, 175
 Wool, for women's underwear, 175, 176
 Worry, a cause of wrinkles, 183; effect of, on the skin, 188
 Wrinkles, their causes and treatment, 26, 30, 38, 183, 185-190, 194; due to defective vision, 52
 Wrinkling the brow, 24, 25
- YANKEE TWANG, the, 78
 Youth, search for the Fountain of, vii, 1 et seq.; the period of, 11
- ZINC OXIDE, use of, 39







